Metro Gold Line Foothill Extension

METRO GOLD LINE
FOOTHILL EXTENSION

Prepared for:
Metro Gold Line
Foothill Extension Construction Authority

TOD Corridor Development Assessment Study

Summary Final Report

Prepared by:
IBI Group

In association with:
Arellano Associates | EDAW, Inc. | Melendrez
Reconnecting America | Strategic Economics

Arcadia

Monrovia

Duarte

Irwindale

Azusa

Glendora

San Dimas

La Verne

Pomona

Claremont

Montclair

December
2007

IBI GROUP

Contents

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Metro Gold Line Foothill Extension Construction Authority
Funded by the Federal Transit Administration

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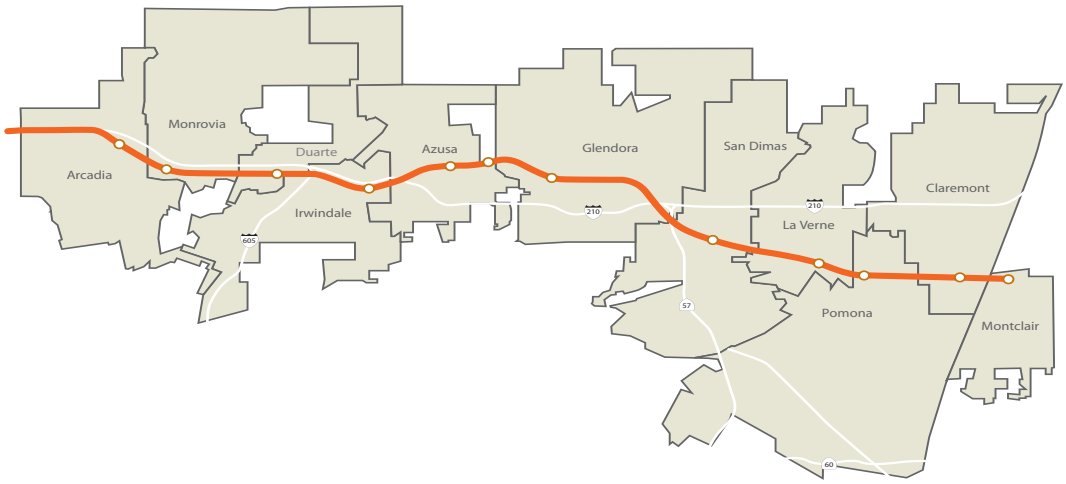
1. Executive Summary



1.1 Overview of the Extension

The Metro Gold Line Foothill Extension Construction Authority is planning a 24 mile extension of the existing Gold Line from its current terminus at Sierra Madre Villa in East Pasadena to the Montclair Transcenter to the east. The planned extension will be constructed on existing rail right-of-way, and will cross through 11 San Gabriel Valley communities, many with historic rail depots. The construction of the line will occur in two phases, with stations from Arcadia to Azusa Citrus expected to open by 2011, and stations from Glendora to Montclair expected to open by 2014. Each of the twelve station locations offers unique opportunities for compact and transit focused development.

The Metro Gold Line Foothill Extension Construction Authority hired the IBI Group Project Team to assess the potential for transit oriented development (TOD) along the corridor and to measure the resulting economic development benefits. The Project Team provided market research, created urban design schemes, researched transportation issues, and provided recommendations for each individual station along the extension.

The Project Team comprehensively studied development opportunities along the corridor as a whole as well as in each corridor city. Based on the corridor-wide analysis and focused studies, the Project Team developed several reports documenting their findings.

This report summarizes our findings for the economic development opportunities for the corridor as a whole, as well as development opportunities for the individual cities. The Project Team's corridor-wide and city study findings are remarkable. With over 1,200 acres of developable land adjacent to the stations, the Metro Gold Line Foothill Extension has the power to transform land use in the San Gabriel Valley. Communities can retain their essential characters, while creating vibrant new centers that accommodate future population and employment growth.

Many station areas are already seeing thoughtful station area development projects, other cities are updating their Zoning Codes, some have examined transportation and parking issues, while others are developing entire new districts focused on Transit Oriented Development principles and Smart Growth. The region, the corridor, and each San Gabriel Valley city is eager to see the rail implemented.

1.2 Purpose and Funding of this Project

As part of the 2005 Transportation Authorization Bill, the Metro Gold Line Foothill Construction Authority received a grant from the Federal Transit Administration (FTA), to support corridor city planning and implementation of transit oriented developments (TOD) along the Foothill Extension Corridor. The IBI Group Project Team was commissioned to study the corridor

and equip each corridor city with the tools to plan for transit focused development and transportation integration.

1.3 Findings

The Foothill Extension Corridor is a truly unique opportunity to accommodate population growth while providing a new job centers and thoughtful compact development. The economic benefits of the Foothill Extension are exceptional - with over $43 billion in new public and private development, new household spending, and property taxes to be generated over 30 years as a result of the extension of the Metro Gold Line within the San Gabriel Valley.

The 11 cities along the line have been planning and zoning for transit oriented development and almost all are experiencing significant development activity. The City of Monrovia has updated the land use and circulation elements of its General Plan in order to channel growth into a major transit village next to its historic station depot. Duarte's updated General Plan includes a new transit oriented neighborhood downtown, and TOD has been discussed in community workshops. Irwindale is considering a major retail development and increased commercial density around its station, and there are several major brownfield sites that could be redeveloped as workforce housing. There are three proposed developments north and south of Azusa's downtown station - including the 1,250 Rosedale residential development recently opened adjacent to the proposed Citrus Station.

Existing Station Area Redevelopment in Claremont

Proposed Station Area Development in Monrovia

The Foothill Extension offers significant opportunity to fundamentally change land use patterns in the San Gabriel Valley. There are approximately 1,200 acres of transit adjacent opportunity sites, roughly the size of Downtown Los Angeles, to accommodate future job and population growth supporting new transit-oriented development. By 2035, the population of the San Gabriel Valley is forecast to be approximately 2.5 million. This 600,000-person increase over the current population of 1.9 million is equivalent to more than four times the current population of Pasadena. Over 170,000 new housing units will be needed to accommodate this growth.

The corridor cities realize the opportunity to accommodate growth by committing to planning and zoning for higher-density mixed-use development around stations. By increasing density within station areas the San Gabriel Valley will be able to accommodate projected growth while minimizing the impact of traffic and development on existing single-family neighborhoods. The Project Team conservatively estimates new residential development around stations could absorb 17,000 new households.

The San Gabriel Valley is already an economic powerhouse and renowned research and technology incubator. The Foothill Extension would connect a dozen major research and technology facilities, including the City of Hope National Medical Center, as well as 16 colleges and universities.

In 2005 there were 122,500 jobs within two miles of the planned stations. By 2035, there will be an additional 124,000 jobs in the San Gabriel Valley including 49,000 new jobs along the corridor. Half of the newly created jobs in the Extension Communities could be accommodated within walking distance of the station sites.

Evidence of the strong market for transit oriented development includes the success of new development along the first phase of the Gold Line and at Metrolink stations in the San Gabriel Valley. New developments will absorb pent-up demand from Phase 1 station areas, and will offer transit oriented housing opportunities to a market with a wider range of pricing needs.

Economic development benefits associated with the Foothill Extension through 2030 are estimated to be $43 billion dollars. It is projected that station areas could generate $36 billion in

Metro Gold Line Foothill Extension
Public and Private Investment

City	Project	Private Inv.	Public Inv.	Total
Azusa				
	Risedale Development Project - ALP	$ 600,000,000		$ 600,000,000
	Block 36 - Lowe Enterprises	$ 40,000,000		$ 40,000,000
	Azusa General Plan Update (2004)		$ 2,500,000	$ 2,500,000
	Watt Genton's Downtown North	to be determined		
	North Downtown Plan		$ 500,000	$ 500,000
Subtotal		$ 640,000,000	$ 3,000,000	$ 643,000,000
Arcadia				
	Small scale mixed-use project - 6 senior condominium units	$ 15,457,517		$ 15,457,517
	24 Hour Fitness Center (1st Ave. and Santa Clara)	$ 7,860,000		$ 7,860,000
	Metro Gold Line grade separation		$ 13,000,000	$ 13,000,000
	Downtown 2000 Project		$ 9,000,000	$ 9,000,000
Subtotal		$ 23,317,517	$ 22,000,000	$ 45,317,517
	Village Walk - Olson	$ 27,842,328		$ 27,842,328
	North Village - Tolkin Group	$ 11,529,296		$ 11,529,296
	Packing House Redevelopment - Arteco partners	$ 3,992,688		$ 3,992,688
	Public parking/retail structure		$ 11,000,000	$ 11,000,000
	North Village improvements		$ 3,000,000	$ 3,000,000
	Claremont General Plan Update		$ 1,100,000	$ 1,100,000
	Traffic Management Center		$ 500,000	$ 500,000
	Village Expansion Specific Plan		$ 400,000	$ 400,000
	Sidewalk improvements (S.College adjacent to RR tracks)		$ 65,000	$ 65,000
Subtotal		$ 43,303,252	$ 16,065,000	$ 59,368,252
Duarte				
	Duarte General Plan Update		$ 281,000	$ 281,000
	Town Center Concept Plan		$ 40,000	$ 40,000
Subtotal		$ -	$ 321,000	$ 321,000
Glendora				
	Residential and office mixed-use development - The Morgan Group	$ 45,000,000		$ 45,000,000
	Mixed-use development - Gangi	$ 8,600,000		$ 8,600,000
	Mixed-use development - Milan Properties			$ -
	Residential development - Neiman Properties			$ -
	Route 66 Specific Plan		$ 600,000	$ 600,000
Subtotal		$ 53,600,000	$ 600,000	$ 54,200,000
La Verne				
	Lordsburg Courts development	$ 15,000,000		$ 15,000,000
	University of La Verne Phase 1 Master Plan Development	$ 10,000,000		$ 10,000,000
	Private investment in San Pablo and La Verne Business	$ 9,500,000		$ 9,500,000
	Arrow Corridor Specific Plan	$ 40,000	$ 33,000	$ 73,000
	Paper Pack - Mixed-use Development		$ 35,000,000	$ 35,000,000
		$ 34,540,000	$ 35,033,000	$ 69,573,000
Monrovia				
	Monrovia Station Square - Samuelson &	$ 1,000,000,000		$ 1,000,000,000
	Monrovia development - Bowden	$ 5,100,000		$ 5,100,000
	Mothers Foods development	$ 1,000,000		$ 1,000,000
	Property acquisition for Monrovia Station Square - Samuelson & Peter		$ 21,000,000	$ 21,000,000
	Federal funding for station improvements		$ 3,000,000	$ 3,000,000
	Foothill parking lot repaving		$ 3,000,000	$ 3,000,000
	Monrovia General Plan Amendment		$ 300,000	$ 300,000
	Mountain Avenue improvements		$ 300,000	$ 300,000
Subtotal		$ 1,006,100,000	$ 27,600,000	$ 1,033,700,000
Montclair				
	New Police Station		$ 30,000,000	$ 30,000,000
	Infrastructure improvements		$ 4,000,000	$ 4,000,000
	North Montclair Downtown Specific Plan		$ 300,000	$ 300,000
Subtotal		$ -	$ 30,300,000	$ 30,300,000
Pomona				
	Pomona General Plan Update		$ 1,200,000	$ 1,200,000
	Adoption of new redevelopment areas		$ 200,000	$ 200,000
Subtotal		$ -	$ 1,400,000	$ 1,400,000
San Dimas				
	Mixed-use development - Fox	$ 45,000,000		$ 45,000,000
	Mixed-use development land acquisition		$ 1,500,000	$ 1,500,000
	San Dimas Downtown Charrette		$ 30,000	$ 30,000
Subtotal		$ 45,000,000	$ 136,300,000	$ 181,300,000
Total		$ 1,845,860,769	$ 272,750,000	$ 2,118,610,769

Public and private investment approximations April 2007

development activity, including over $2 billion of development investment already underway in anticipation of the Foothill Extension. By 2030, planned residential development could generate up to $6.2 billion in new household spending. It is also expected that development along the line will result in an additional $1.3 billion in total property tax revenues, and up to $114 million in total sales tax revenues. Anticipated economic development benefits total $43.6 billion. Assuming a project cost of $1 billion, every dollar of public investment yields nearly $44 of economic development benefits.

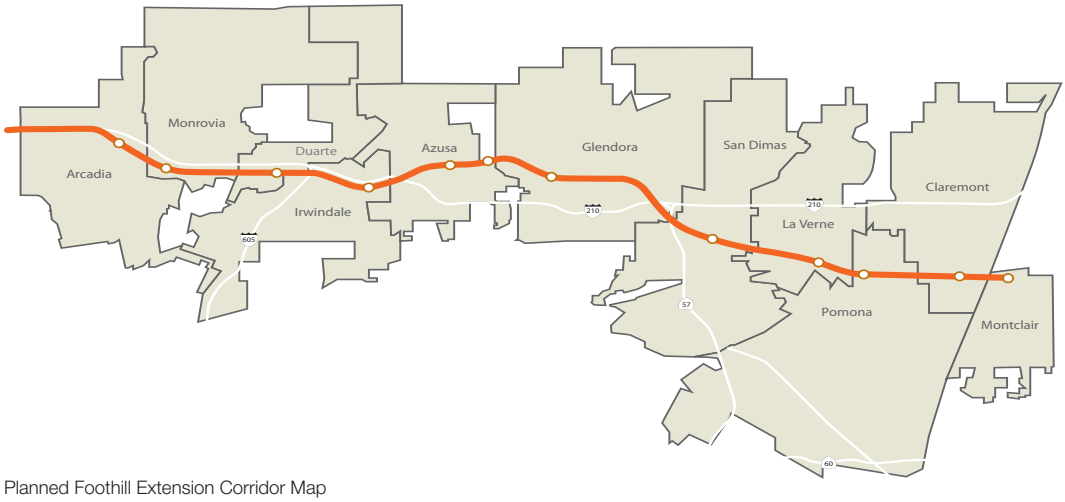
As a result of the Gold Line's initial success, the San Gabriel Valley cities have expressed support for the proposed Gold Line Foothill Extension. Each city is actively planning for and supportive of the implementation of transit oriented station area development. The Metro Gold Line Construction Authority began working with civic leaders on planning efforts to support Phase 2 as soon as Phase 1 was completed. This sent a signal to developers and has already helped leverage $2

billion in investment. There is community consensus and enthusiasm along the corridor. The opportunities to manage growth while transforming land use are unequaled.

2. Background Information

2.1 Metro Gold Line Foothill Extension

The first phase of the Gold Line Foothill Extension will expand rail service to Montclair from the existing Metro Gold Line rail corridor. The planned Extension will begin at the existing Sierra Madre Villa station in Pasadena, and continue for 24 miles through the northern San Gabriel Valley. This line will offer frequent service, with ten-minute headways during commute hours, and 20-minute headways at non-peak times.



Planned Foothill Extension Corridor Map

Passing through ten cities in the San Gabriel Valley, as well as the Montclair Station in San Bernardino County, the proposed light rail system will significantly change land uses while providing job growth and housing opportunities. The system will be constructed on existing rail right-of-way, and will primarily cross through areas that currently operate as industrial or light industrial uses. The construction of the line will occur in two phases, with stations from Arcadia through Azusa Citrus expected to open by 2011, and stations from Glendora to Montclair expected to open by 2014. Each city offers unique opportunities for compact and transit focused development.

The Study, commissioned by the Metro Gold Line Authority, evaluated the corridor-wide potential and individual cities' potential for transit oriented development. The first phase of the Gold Line, operating since 2004, connects downtown Los Angeles to Pasadena.

The existing Gold Line has generated significant reinvestment in the communities along corridor. Compact villages and transit hubs have developed along the Los Angeles to Pasadena corridor. Developers were eager to build transit oriented projects. The Holly Street mixed-use transit village in Old Pasadena was constructed to incorporate an underground station almost a decade before the train arrived in 2004. It includes 375 apartments, lofts and townhomes in seven buildings, with offices, ground floor retail and a hotel. Pasadena's Del Mar project also incorporates a station, and includes 350 apartments, 20,000 sq. ft. of retail including a restaurant in a renovated historic train station. South Pasadena's Mission Meridian pays respect to the surrounding single-family neighborhood with a mix of housing types that get more dense near the station: there are single family homes on the periphery, then courtyard housing, lofts and condos, plus neighborhood-serving retail. The Avenue 26 project in Los Angeles has added 600 units of low-income, workforce and senior housing, both rental and for sale, and a nearby historic industrial space offers both affordable and market-rate lofts with a view.

At least a dozen other projects have gone up near the stations since the line opened in 2004. Del Mar alone has added 1,500 housing units and 170,000 sq. ft. of retail within the half mile – and many more projects are planned. With the success of the first phase, the value of determining the potential for Transit Oriented Development along the Foothill extension became critical.

2.2 The Foothill Extension Transit Oriented Development Study

Methodology & Study Effort

The study effort had two objectives: to examine the potential for transit oriented development appropriate to each community along the corridor and to measure the synergies that occur

between origins and destinations. In particular, the study sought to measure the economic development impact of transit oriented development.

The project also emphasized “hands on” experiences to create a common understanding of TOD and its potential. One of the earliest project activities was to conduct tours of TOD projects in the Portland, Oregon area.

Tours

The Project Team organized two trips for stakeholders to the Portland Region to observe the transit oriented developments along established light rail corridors and glean ‘lessons learned.’ Portland’s TriMet operates a comprehensive transit network including a 44-mile, 64 station MAX light rail system, 91 bus lines, service for seniors and people with disabilities, and enhanced amenities and information. It has been two decades since the Portland area began redirecting transportation funding from highways to transit, becoming a light-rail model for the nation. Portland’s TOD ranges from higher density single family detached housing to mixed use downtown condominiums all adjacent to transit. The wide availability of transit has allowed for reduced parking at station area developments. The Portland model has become ever more popular with constituents and continues to benefit the immediate and regional community.

Portland’s progressive transportation and land use planning has produced dividends setting Portland apart from other cities. The Portland story is significant because of the results. Portland’s policy makers are continually exploring new land uses configurations to support transit use.

Because of the Portland region's land use policies, transit is becoming a preferred mode of transportation, improving quality of life, easing automobile congestion, and reducing pollution. The San Gabriel Valley cities can anticipate seeing the results Portland has experienced including the benefits of mode choice, reduced congestion, and improved air quality.

Once the Portland tours established a common understanding of the potential of TOD, the Project Team met with representatives of each corridor city to determine the best way to advance TOD efforts in each community. Some communities like Monrovia, Azusa, and Claremont are well advanced in their TOD planning and implementation. Others, like Irwindale, are just beginning to explore TOD in the context of their overall community goals.

The Team's initial effort was to develop a comprehensive understanding of existing conditions in the one-half mile area around each of the station sites. This included a survey of current land uses, parking and traffic conditions, and land use regulations. These baseline conditions were used to estimate the potential for future TOD.

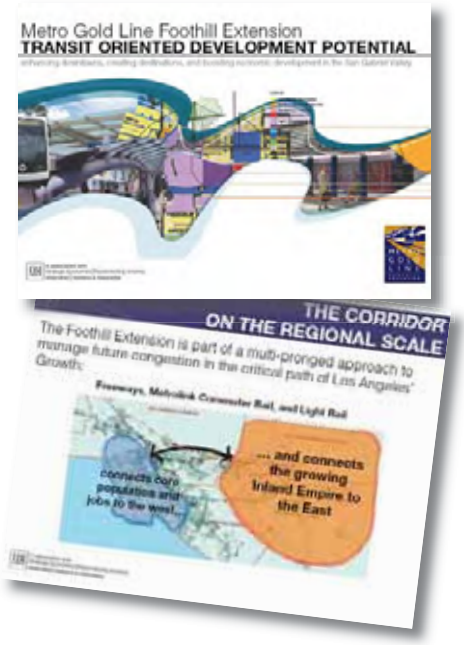
The Project Team prepared a scope of work for each corridor city and worked closely with city staff to augment (or initiate) TOD efforts. The work product for each city is described in Section 2.3; the opportunities and recommendations for each city are summarized in Section 5.

Once baseline conditions for each station area were established and the city tasks underway, the Team began to focus on the potential regional economic development benefits from development along the corridor. The amount of land available for redevelopment at each station was estimated. An allocation of future land uses and densities was approximated based on local character and land use policies. Finally, the land area by type of use was aggregated along the corridor and a phased development schedule assumed. The corridor-

wide economic development impact was calculated using the industry standard IMPLAN economic development model.

The corridor-wide assessment also considered origins and destinations. In order to be successful, development along the corridor needs to feature a mix of housing (origins) and commercial uses such as office, retail, hotel, and civic uses (destinations). Many potential destinations such as City of Hope Medical Center and 16 colleges and universities are already located within the study area. The Project Team conservatively estimated that there is sufficient capacity to house 17,000 new families and accommodate 49,000 new jobs within a half-mile of corridor stations. This has a significant effect not just on economic development, but also regional congestion and air quality.

Outreach



Drawing upon the conducted research and projections, the Project Team developed a presentation to share the study's economic findings with cities and regional stakeholders. The Project Team prepared a presentation for the September 12, 2007 meeting with regional stakeholders and key decision makers. The Project Team also created a video presentation for the meeting on September 12,2007. The video illustrated both the need for and the support for the proposed Extension. The video was also intended for a larger audience including state and federal decision makers and local elected officials.

2.3 Summary of Corridor-wide Work Products

The Project Team evaluated the Foothill Extension corridor with a 'big picture' perspective: studying the existing corridor-wide conditions, evaluating the regional economic benefits, and considering the implementation logistics. The six work products developed for the corridor-wide study effort are described below.

1. Station Area Planning Books

Developed to provide a comprehensive database of existing information for each station location, the Station Area Planning Books consolidated all existing conditions along the corridor. Land Use, General Plan designations, Redevelopment Plans and all other valuable information was combined into one central document for the benefit of the cities, the Project Team, and other interested parties.

2. TOD Framework Report

The Project Team developed a detailed TOD Framework Report as a primer for those cities that have not yet undertaken transit oriented development plans. The report also serves as a refresher for those which have already initiated the process. The primer will provides common basis of understanding so that all cities would be on a level playing field.

3. Market Study

The Project Team studied and analyzed the market demand for various types of development considering existing demand factors and the potential impact of the transit corridor. The market study estimates the demand on both the corridor and regional levels. The Project Team's regional-level market analysis evaluated the proposed transit system and possible TOD amenities which attract demand from throughout the region.

4. Joint Development Opportunities

Strategic joint development can leverage a TOD plan and increased ridership beyond parcels owned by the transit agency or private land owners. The Project Team developed information describing the opportunities and parcels that are economically viable. The opportunity sites and implementation measures are discussed in this report.

5. Park and Ride Report

The purpose of the Park and Ride Analysis was to examine the locations of Park and Ride facilities set out in the Project Definition Report and the FEIS Report in the context of proposed plans for transit oriented development.

6. Right-Of-Way Report

The Project Team's urban design and transportation analysis undertaken for the cities did no result in changes to the right-of-way requirements set out in the environmental documents. It may be necessary to look at the revisions to the right-of-way requirements in the future in the revised station location in San Dimas.

2.4 Summary of Specific Corridor City Work Products

The Project Team also studied the corridor on a more detailed level - evaluating each station location and working with each City to further their specific transit goals. The Project Team met with each of the 11 corridor cities early in the process to begin to frame the individual city assistance to further Transit Oriented Development. After meeting with each city, the Project Team developed individual scopes which focused on city specific needs and important implementation measures. The following section outlines the individual city meetings, key staff, and scopes for each city and station location. Section 5 of this report describes the opportunities and recommendations for each corridor city.

Arcadia

The Project Team met with the City of Arcadia on January 9, 2007 to discuss Transit Oriented Development Opportunities and existing conditions. The following individuals were in attendance:

Don Penman, Assistant City Manager &
Development Services Director
Jason Kruckeberg, Community Development Administration
Martha Eros, Transportation Services Officer
Phil Wray, City Engineer

Subsequent to the initial meeting with City Staff, the Project Team held ongoing meetings throughout the study process with various staff members to refine the city scope, discuss draft products and present graphic materials and reports. The Project Team produced a Transit Plan and a Multi-Modal Transportation Framework focused on connecting the regional anchors – Santa Anita Racetrack, the Arboretum, and retail attractions – to the Gold Line station site. The framework serves as a guide to future development and may serve as an update to the circulation element. The developed scheme will define linkages between the station and the regional attractions.

Monrovia

Monrovia Streetscape Improvements

The Project Team met with the City of Monrovia on January 10, 2007 to discuss Transit Oriented Development Opportunities and existing conditions. The following individuals were in attendance:

Tito Haes, Deputy City Manager
Alice Griselle, Director of Community Development
Douglas Benash, City Engineer
Steve Sizemore, Planning Manager
Craig Jimenez, Principal Planner

The City of Monrovia is currently evaluating plans for a large scale compact mixed-use developing their station area. The current plan will bring over 3,800 new residences - ranging from 30 to 75 du/acre - while also providing office, retail, and hotel opportunities.

The Project Team held meetings with the City to refine the city scope, discuss draft products and present graphic materials and reports. For Monrovia, the Project Team evaluated possible transit links for buses, pedestrians, and bicyclists to the connections between the proposed Gold Line station and downtown. The options include recommendations related to proposed pedestrian enhancements and streetscape improvements in order to reduce the barrier of the freeway and increase station visibility and connections.

Duarte

Duarte Station Area Village Vision

The Project Team met with the City of Duarte on January 9, 2007 to discuss Transit Oriented Development Opportunities and existing conditions. The following individuals were in attendance:

Darrell George, City Manager
Karen Herrera, Assistant to City Manager
Jason Golding, Senior Planner

The Project Team held ongoing meetings throughout the study process with staff to refine the city scope, discuss draft products and present graphic materials and reports.

The City of Duarte asked the Project Team to evaluate the possibilities and feasibility of a Village Concept north of the proposed station area and south of the 210 freeway. The urban concept focused on developing compact mixed-uses while providing opportunities for growth in office, retail, and hotel land uses. The deliverable consisted of two-dimensional site plans and three-dimensional sketches up plans, were drafted and a implementation strategy is in the pipeline.

Irwindale

Irwindale Intensification Concept

The Project Team met with Ray Hamada at City of Irwindale to discuss Transit Oriented Development Opportunities and existing conditions for the Irwindale station location. Throughout the study process, the Project Team held various meetings to refine the scope and final deliverable with the city.

The Project Team developed a TOD plan for the industrial area

surrounding the station location in Irwindale. The plan focused on the existing underutilized industrial/office uses within the station area and recommended higher and best uses for the intensification of the area. Urban design plans, two-dimensional site plans and three-dimensional sketch-up plans, were created.

Azusa

Azusa's Parking District

The Project Team met with James Makshanoff, the Public Works Director at the City of Azusa on January 17, 2007 to discuss Transit Oriented Development Opportunities and existing conditions.

The City of Azusa has multiple transit oriented developments underway all supporting multimodal transit while providing a rich mix of compact uses. The Rosedale Development Project is a 1,250 residential project adjacent to the Citrus Station . The Downtown Alameda Station is also being intensified. The Block 36 project will provide a mix of uses, a pubic library, and provide senior housing. Watt Genton's Downtown North project is bringing a major regional retailer to the development site.

The Project Team held various meetings with staff throughout the study process to further refine the city scope, discuss draft products and present graphic materials and reports. From these discussions, the Project Team developed a comprehensive TOD Parking District Study for the City of Azusa. The Downtown TOD parking implementation strategy involves economic and market feasibility component of developing one or more parking structures in Downtown as well as other shared parking

strategies. The Parking District Study builds upon existing work products and elevates the effort to the next level, including an updated analysis of the existing and future parking needs, an analysis of the most suitable locations for the parking structures, the cost for developing such a structure(s), and anticipated development time frames and project phasing, and an actual parking funding strategy were also provided.

Glendora

Glendora's Station Area Vision

The Project Team met with the City of Glendora on January 10, 2007 to discuss Transit Oriented Development opportunities and existing conditions. The following individuals were in attendance:

Doug Tessitor, Mayor
Eric Ziegler, City Manager
Diane Walter, City Planner

Subsequent to the initial meeting with City Staff, the Project Team held ongoing meetings throughout the study process with staff to refine the city scope, discuss draft products and present graphic materials and reports.

The site immediately adjacent to the station has recently been sold to Nieman Properties , who plans to develop the site with 84 residential units. The project will include pedestrian access to the platform and re-creation of the historic station.

Realizing the opportunity for intensification within their station area, the City of Glendora asked the Project Team to develop concepts for the intensification for their downtown village and

existing suburban community. The TOD Study focused on the area north of the proposed transit station and the area south of Foothill Boulevard. The developed schemes and designs focused on making valuable and thoughtful connections between the downtown village and suburban community.

San Dimas

Existing San Dimas Streetscape

Potential Change

The Project Team met with the City of San Dimas on January 18, 2007 to discuss Transit Oriented Development opportunities and existing conditions. The following individuals were in attendance:

Blaine Michaelis, City Manager
Krishna Patel, Director of Public Works
Larry Stevens, Assistant City Manager &
Director of Community Development
Dan Coleman, Director of Development Services

The City of San Dimas is in the process of evaluating a new station location. The feasibility of the station location request was evaluated by the Project Team. The Station Relocation Study examined the TOD potential for a new station area, including two-dimensional and three-dimensional plans, demonstrating the new location's ability to be integrated within the community.

La Verne

City of La Verne
Station Area Simulations

The Project Team met with the City of La Verne on January 10, 2007 to discuss Transit Oriented Development opportunities and existing conditions. The following individuals were in attendance:

Hal Fredericksen, Director of Community Development
Arlene Andrew, Senior Planner
Amy Altomare, Assistant Planner

The City of La Verne is introducing compact development within their station area. The Lordsburg Court residential development, the University of La Verne Phase 1 Master Plan Development, private investment in San Palo and La Verne Business, Arrow Corridor Specific Plan, and the Paper Pack expansion project - all support the principles of TOD and smart growth.

The City of La Verne requested a transportation plan, focusing on vehicular circulation on Arrow Highway, and a peer review for their station area plans. The transportation plan focused on existing and anticipated roadway demand and will incorporate recommendations for all modes of traffic. The Plan focuses on enhancing specific implementation policies and multi-modal recommendations – the auto circulation, transit modes, bike, and pedestrian circulation. The IBI Group has also provided a full review of the Arroyo's Group's report on station area development.

Pomona

Pomona's Station Area Vision

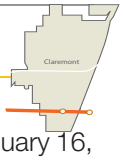
The Project Team met with the City of Pomona on January 18, 2007 to discuss Transit Oriented Development opportunities and existing conditions. The following individuals were in attendance:

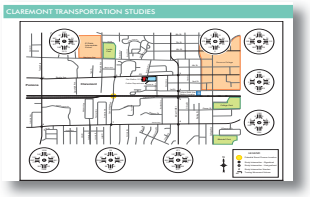
Andre Dupret, Deputy City Manager
Tim D'Zmura, Director of Public Works, City Engineer
Linda Lowry, Assistant City Manager
Charles LaClaire, Planning & Housing Director
Raymond M.Fong, Deputy Executive Director of Redevelopment

The Project Team held many meetings with key staff throughout the design process with staff to refine the city scope, discuss draft products and present graphic materials and reports.

For the City of Pomona the Project Team developed a station area vision reevaluating land uses which focused compact development in and around the station area. The concepts encouraged the intensification of residential and commercial uses with the goal of implementing transit oriented development around the station area.

Claremont





Excerpt from Claremont's Transportation Plan

The Project Team met with the City of Claremont on January 16, 2007 to discuss Transit Oriented Development opportunities and existing conditions. The following individuals were in attendance:

Jeffrey Parker, City Manager
Craig L. Bradshaw, City Engineer
Lisa Prasse, City Planner
Colin Tudor, Management Analyst

Subsequent to the initial meeting with City Staff, the Project Team held ongoing meetings throughout the study process with staff to refine the city scope, discuss draft products and present graphic materials and reports.

The City of Claremont utilized the team's transit expertise and commissioned studies to evaluate Claremont Cambridge Crossing Closure and Parking Study. The Project Team evaluated conditions along the Cambridge Avenue closure compared to conditions without the closure to determine the impacts to vehicular level of service, emergency vehicle response times, pedestrian access, and socioeconomic conditions.

Montclair

The Project Team met with the City of Montclair on January 9, 2007 to discuss Transit Oriented Development Opportunities and existing conditions. The following individuals were in attendance:

Lee McDougal, City Manager
Marilynn Staats, Director of Community Development
Steve Lustro, City Planner
Mike Hudson, City Engineer

Subsequent to the initial meeting with City Staff, the Project Team held ongoing meetings throughout the study process with staff to refine the city scope, discuss draft products and present graphic materials and reports.

The Montclair station location is unique. The future station will serve both the existing Metro Link stop and the Gold Line station. This duel station location is land locked between seas of surface area parking. Montclair saw the potential in their parking property. The project team considered parking strategies and developed a Parking Assessment Study focused on phasing and feasibility of designated parking land for conversion to other uses. The Team evaluated the current and future parking demand and created a phased structured parking strategy to accommodate future development.

3. Corridor-wide Opportunities

3.1 TOD Framework Report

Transit-oriented development is typically defined as compact development containing a mix of uses within easy walking distance (a quarter – to one half-mile radius) of transit stations. But a prescribed density or mix of uses can't ensure the success of a transit oriented development project or guarantee that it will produce more riders for transit. It's become increasingly clear that TOD cannot be defined by physical form alone, and those high-performing projects – whether performance is judged by financial returns or the number of people who flock there – are best defined by performance criteria that can be used as a planning tool to assess how well a project will function.

The Project Team sets out a "performance-based" definition of TOD – TOD is not just development near transit stations but rather it is development that:

- Increases "location efficiency" so that people can walk, bike and take transit
- Boosts transit ridership and minimizes the impacts of traffic
- Provides a rich mix of housing, jobs, shopping and recreational choices
- Provides value for the public and private sectors, and for both new and existing residents
- Creates a sense of community and of place

These goals aren't just an urban planner's wish list. They dovetail with the elements of "livability" cited in numerous public opinion surveys conducted to determine how people define "quality of life." It's essential to think about TOD from the perspective of people who will use it. Can parents drop a child off at day-care on the way to work? Can errands be done on foot? Is it possible to take a business client to lunch without having to drive there? TOD is ultimately about creating sustainable, walkable neighborhoods where people can live convenient, active, affordable lives. TOD helps provide more housing and transportation choices for people of all ages and incomes in development that benefits both new and existing residents.

Moreover, TOD isn't simply a project but needs to be thought of as encompassing a district or neighborhood, with a mix of uses that complements surrounding land uses and that reflects the needs and desires of those who live and work nearby. TOD needs to achieve a functional integration of transit with surrounding development so as to create a synergy among all the uses. And place-making – the art of creating a place that people want to live in or visit – may be almost as important to TOD as transit. In order to succeed in creating TOD that functions differently than conventional development, projects should achieve the following five main goals:

- Creates a sense of place
- Value capture for transit proximity
- Offers a rich mix of choices
- Boosts transit ridership and minimizes traffic
- Increases location efficiency

TOD has the potential to benefit both new and existing residents of all ages and income levels, local governments, transit agencies, local merchants, developers and investors, property owners, and all those who don't want to have to drive. TOD is really about people-oriented development, as discussed above, and sustainability in terms of both transportation and land use. Here is a partial list of benefits, some of which can also be seen in the diagram that follows, which also illustrates how TOD can work in harmony with mixed-income strategies:

- TOD is more sustainable development
- More efficient use of land, energy and resources
- Helps conserve open space
- Less oil and gas consumption
- Less air pollution
- Minimizes traffic increases
- Encourages walking
- Increases revenues, allowing cities to lower tax rates and compete with suburbs
- Increases transit ridership at a lower cost than if bus service or parking structures are needed to bring riders to stations
- Increases property values, lease revenues and rents

- Increases foot traffic for local businesses
- Creates opportunity to build mixed-income housing
- Height and density can pay for community benefits and affordability
- Reduces transportation expenditures
- Promotes healthier lifestyles
- Neighborhoods are safer because there are more people on the street and more "eyes on the street."

The Federal Transit Administration evaluates and recommends projects for funding using a "multiple measure" approach that assesses the merits of each project according to the following measures: mobility improvements, environmental benefits, operating efficiencies, cost-effectiveness, transit supportive existing land use policies and future patterns, and "other factors" These "other factors" include:

1. The degree to which local transportation planning, programming and parking policies, etc., are in place.

2. Project management capability

3. In evaluating the land use potential for a New Start project, FTA applies eight transit-supportive land use measurement factors:

    - Existing land use
    - Growth management programs
    - Transit-supportive corridor policies
    - Supportive zoning near stations
    - Tools to implement land use policies
    - Performance of land use policies
    - The potential impact of the transit investment on regional land use.

SAFETEA-LU Congress amended the New Starts program to elevate the importance of land use and the impact of a project on economic development. To date, though, FTA has not opted to incorporate that change in the New Starts Guidance and has deferred implementation until publication of the SAFETEA-LU Final Rule, which is currently scheduled for publication in the Federal Register in January 2008.

These criteria have motivated project sponsors to begin planning and zoning for TOD early in the planning and design of transit projects. By the end of Preliminary Engineering the FTA expects corridor and station area conceptual plans, TOD zoning recommendations for individual stations. Transit agencies should be proactive - working with local governments and developers to ensure transit-supportive development is occurring in the corridor. By the end of Final Design the FTA expects that station area plans and TOD zoning will be adopted by local governments, that a joint development program and appropriate financial tools will be in place, and that a number of TOD development proposals for each station area will have been completed.

Using this analysis, It Is possible to evaluate TOD projects in a new light and to take a different approach to improving them. What follows is a list of actions that can be taken by the transit agency and by local governments to help TOD projects move forward.

3.2 Market Study Findings

The Foothill Extension presents enormous opportunity to further integrate the San Gabriel Valley with the greater Los Angeles region, and take full advantage of market momentum for TOD from recent projects in the Pasadena and Claremont areas. The proposed light rail will include twelve stations in eleven cities representing 1,200 acres of development opportunity. When introduced, these stations will greatly increase the supply of land for potential TOD. The key to achieving quality TOD at these new stations is to phase development in a way that takes advantage of current development opportunities while planning and preparing for the future.

The extension presents a long-term opportunity to improve the development, design, and mix of uses in the surrounding half-mile station areas and beyond. Some cities will realize this opportunity sooner than others because they already possess many of the features needed to encourage good TOD, including market interest, political support, and/or a pedestrian scale street layout and use mix. Stations such as Arcadia, Monrovia, Azusa Alameda, Azusa Citrus, Claremont, and Montclair are experiencing development interest and are already encouraging TOD in advance of the Foothill Extension operation.

Successful development at Mission station in South Pasadena, and the Del Mar and Sierra Madre stations in Pasadena are already creating pressure for development at the Arcadia and Monrovia stations. These cities will need to move quickly to ensure that plans are in place to accommodate the greatest levels of new development and to ensure good local

bus connections to nearby destinations such as the Santa Anita Racetrack, the Westfield Mall, the Methodist hospital, Old Town Monrovia, and offices along Huntington Boulevard. Claremont and Montclair have already completed major planning efforts and are moving forward with development that adheres to the vision outlined in these plans. The presence of the Metrolink stations has been one of the major drivers of this growth.

The City of Azusa also offers significant short-term opportunity. The three major developments occurring near their station locations - Rosedale, Block 36, and Watt & Genton's Project - are bound to spur additional transit focused projects in the station areas.

The successful development at all four of these stations will likely generate interest in other nearby stations on the Foothill Extension. Stations such as Duarte, Glendora, La Verne and Pomona will likely follow with a mid-term phase of transit-oriented development. These stations will need to establish strong station area plans to link to nearby features such as the City of Hope, nearby grocery stores and neighborhood retail as well as the Fairplex and La Verne University. These station areas may support TOD, but the success of their development is dependent on making supportive policy changes and establishing a good pedestrian scale street grid and use mix.

Irwindale and San Dimas have limited short or mid-term potential for TOD, for vastly different reasons. Irwindale sustains a vital mix of industrial and warehousing jobs, and the station area's existing land use pattern leaves little possibility for TOD. While San Dimas offers good potential connections to Old San Dimas, the City's hesitation to support TOD policies – including allowing increased densities or significant new development – leaves very few short or mid-term opportunities for a successful TOD. Nonetheless long-term economic or political shifts could open up potential for new types of uses at these stations.

Given the number of stations that will be introduced along this transit extension, the longer term phasing of development at some stations will be advantageous for the corridor. With the short term land supply constrained, development can be concentrated at several stations, which will help to introduce the concept of TOD on the corridor and generate further momentum for new development at stations that require major infrastructure improvements, land assembly, and planning to create TOD opportunities. Moreover, the market for TOD in the Los Angeles region is long-term, and new types of transit-oriented uses may emerge over time as the transit system matures and more demographic segments have a demand for TOD. Stations with longer-term opportunities will be able to take advantage of these changes and evolve with the market, ensuring that the corridor's overall development remains diverse, complementary, and economically vital.

Phase 2 of the Gold Line will link these eleven cities and their real estate markets in a new way. The market study found that Phase 2 offers significant opportunity to fundamentally change land use patterns in the San Gabriel Valley. There are 1,200 acres of opportunity sites, roughly the size of Downtown Los Angeles, and there is strong market and political support for new transit-oriented development.

Evidence of the strong market for transit-oriented development includes the success of new development at Phase 1 and Metrolink stations in the San Gabriel Valley. Phase 2 developments will absorb pent-up demand from Phase 1 station areas, and will offer transit-oriented housing opportunities to a market with a wider range of pricing needs. The market study found further potential synergies between Phase 2 stations. For example, the Claremont Station, located in the downtown village, has recently added new housing and commercial development and is becoming a highly popular community in which to live. However, there are limited opportunity sites remaining at this station. Phase 2 will open up opportunities for the Montclair, Pomona, and La Verne stations to absorb Claremont's pent up demand for new housing and retail space, providing new residents with easy transit access to desirable amenities and destinations in Claremont's downtown.

4. Corridor-wide Recommendations

4.1 TOD Framework Recommendations

A focus on a performance-based definition of TOD leads to a different view of why TOD projects often do not live up to their potential:

- Projects fail to recognize the tension between node and place
- Planners lack guidelines about what makes a place work
- Unleashing synergy is complicated
- The regulatory and policy environment is fragmented
- The market may not be supportive

Using this analysis, it is possible to evaluate TOD projects in a new light and to take a different approach to improving them. What follows is a list of actions that can be taken by the transit agency and by local governments to help TOD projects move forward.

4.2 Metro Gold Line Authority Recommendations

The Project Team recommends that The Authority:

1. Participate in planning for both authority property and the wider station area with the aim of fostering long-term rather than short-term value. Use available resources to support this long-term value.

2. Encourage station access plans that recognize the critical link between the station and its adjacent land uses, as well as the need for the station to be an integral part of a larger area.

3. Plan for TOD at the system-wide scale, assessing opportunities at each station site and thinking regionally about the interplay between land uses around each station and the way they can affect system-wide ridership.

4.3 General City Recommendations

The Project Team recommends that each City:

1. Establish transit oriented development area plans around all stations.
2. Develop a process for interagency coordination with Metro Gold Line Foothill Extension to ensure that projects will both achieve the goals of TOD and move forward expeditiously.
3. Create area-wide parking strategies for TOD projects that include comprehensive management and that “unbundle” parking from other land uses.
4. When necessary, provide financial and land assembly assistance to developers as an incentive for creating optimal TOD projects, including identifying new revenue streams to support bond financing.
5. Establish explicit policies for incorporating mixed-income housing in TOD projects.

4.4 Market Analysis Recommendations

Short Term Development Opportunities

Arcadia | Monrovia | Azusa: Alameda & Citrus | Claremont | Montclair

Arcadia, Monrovia, Azusa Alameda, Azusa Citrus, Claremont, and Montclair are experiencing development interest and pushing TOD planning forward today, well prior to the introduction of the Foothill Extension. Successful development at the stations in Pasadena and Sierra Madre has accelerated demand for development at the Arcadia and Monrovia stations.

These cities will need to move quickly to ensure that plans are in place to accommodate the appropriate levels of new development. Arcadia and Monrovia must focus on local connections such as good local bus service to nearby destinations such as the Santa Anita Racetrack,

the Westfield Mall, the Methodist hospital, Old Town Monrovia, and offices along Huntington Boulevard.

Claremont and Montclair have already completed major planning efforts and are moving forward with development that adheres to the vision outlined in these plans. The presence of the Metrolink stations has been one of the major drivers of this growth. The successful development at all four of these stations will likely generate interest in other nearby stations on the Foothill Extension.

Mid Term Development Opportunities

Duarte | Glendora | La Verne | Pomona

Stations such as Duarte, Glendora, La Verne and Pomona will likely follow with a mid-term phase of transit oriented development. These stations will need to establish strong station area plans to link to nearby features such as the City of Hope, nearby grocery stores, neighborhood retail, the Fairplex, and La Verne University. These station areas may support TOD, but the success of their development is dependent on making supportive policy changes and establishing a good pedestrian scale street grid and use mix.

Long Term Development Opportunities

Irwindale | San Dimas

Irwindale and San Dimas have limited short-term or mid-term potential for TOD, for vastly different reasons. Irwindale sustains a vital mix of industrial and warehousing jobs, and the station area's existing land use pattern leaves little possibility for TOD other than the intensification of existing uses. While San Dimas offers good potential connections to Old San Dimas, the City's hesitation to support TOD policies – including allowing increased densities or significant new development – leaves very few short or mid-term opportunities for a successful TOD. Nonetheless long-term economic or political shifts could open up potential for new types of uses at these stations.

Given the number of stations that will be introduced along this transit extension, the longer term phasing of development at some stations will be advantageous for the corridor. With the short term land supply constrained, development can be concentrated at several stations, which will help to introduce the concept of TOD on the corridor and generate further momentum for new development at stations that require major infrastructure improvements, land assembly, and planning to create TOD opportunities.

Moreover, the market for TOD in the Los Angeles region is long-term, and new types of transit-oriented uses may emerge over time as the transit system matures and more demographic segments have a demand for TOD. Stations with longer-term opportunities will be able to take advantage of these changes and evolve with the market, ensuring that the corridor's overall development remains diverse, complementary, and economically vital.

4.5 Joint Development Recommendations

Joint development strategies should be developed in conjunction with the opportunity sites analysis. In developing a station area plan for any transit zone, it is important to assess early on which areas are:

- in stable uses that are not likely to change
- underutilized in terms of providing ridership for the transit system, even if the use on its own still has considerable economic value
- Acquisition targets used to either leverage other development or provide a long term land banking mechanism to protect future development opportunities. This type of land supply analysis, combined with good market data, can then become the framework for developing a TOD implementation strategy that revolves around taking the proactive steps necessary to facilitate development rather than just focusing on land use policy, like rezoning.

It is also helpful to accept that different stations will emerge as viable joint development sites at different times. In fact, transit agency sites can be defined as either Catalytic Sites – locations where a public agency-led development effort could stimulate private investment in the TOD district – and Value Capture Sites – where publicly-owned or controlled property might be offered for development relatively late in the maturity of an area in order to maximize the returns to the agency. A “Decision Tree” helps to sort out the types of decisions transit agencies are faced with and determine the best approach to joint development at individual sites.

Specific Opportunities for Joint Development along the Gold Line extension

Many stations along the Gold Line Extension are both development opportunity sites and sites where commuter parking is planned. These are the most opportune locations for joint development activities.

City/Station	Planned Transit Parking	TOD Opportunity	Joint Development Notes
Arcadia	800 Stall Parking structure at the northwest corner of Front Street and Santa Clara Street	Minimal	Limited to facilities that provide connectivity to Downtown and other city destinations.
Monrovia	600 spaces	Significant	Opportunity to enter into joint venture with City and private property owners to develop Station Square as a TOD.
Duarte	250 surface spaces	To be defined	Possible joint development opportunity on commuter parking site.
Irwindale	700 surface spaces	To be defined	Possible joint development opportunity on commuter parking site.
Azusa/ Alameda	400 surface spaces	Significant	Projects are already underway surrounding the station and joint development on the surface commuter lot could be an opportunity.
Azusa/ Citrus	350 spaces in 2-story structure	Significant	The Rosedale Community presents an opportunity to create a transit village incorporating commuter parking facilities.
Glendora	400 spaces	To be defined	To be defined
San Dimas	750 in parking structure	To be defined	To be defined
LaVerne	600 surface spaces	To be defined	To be defined
Pomona	800 space parking structure (3-level) on a vacant lot, west of Garey, south of Bonita	To be defined	To be defined
Claremont	700 spaces in a structure on top of existing Metrolink spaces.	Significant	Joint development project to accommodate both parking and retail are being envisioned in the Claremont Village expansion effort
Montclair	800 surface spaces	Significant	To be defined

Next Steps

The communities along the Gold Line Extension have done a tremendous job getting ready for TOD and there is significant potential for a wide range of benefits to accrue local jurisdictions and the region. Recommended next steps include:

- Establish a set of comprehensive Joint Development and TOD policies and procedures that both reinforce the local TOD plans and ensure maximum corridor-wide benefits accrue to the transit agency. The policy should be tailored to the goals an outcomes for the corridor as a whole.
- Undertake an assessment of the specific TOD and Joint Development opportunities along the corridor, categorize publicly-owned or controlled properties as either catalytic or value capture sites, and, if appropriate, use the Decision Tree to identify specific actions at each station.
- Establish clear roles and protocols for working with local jurisdictions along the corridor to ensure that incremental development decisions are strongly supported and expedited.

4.6 Right-of-Way Recommendations

Several permanent property acquisitions required in order to implement the Gold Line Foothill Extension have been identified in the Final EIR (February 2007) for the project. These include both full acquisitions, where an entire parcel would be acquired; and partial acquisitions, where only a portion of land, landscaping, parking and/or structure would be acquired.

Within the station areas, right-of-way may be required for the stations, parking and traction power substations. The below summarizes the number of potential acquisitions for each of the stations along the alignment, by city:

Station	Full Acquisitions	Partial Acquisitions	Relocations
Pasadena	0	0	0
Arcadia	10 (for parking)	2	10 (for parking)
Monrovia	0	4	0
Duarte	1	2	0
Irwindale	1	3	0
Azusa / Alameda	7	0	5 businesses
Azusa / Citrus	0	1	0
Glendora	0	1	0
San Dimas	5	0	1 business
La Verne	0	0	0
Pomona	0	1	0
Claremont	1	5 (Station Option A/B)	9 **
Montclair	0	0	0

** Partial acquisitions may reduce available parking to less than city code requirements, potentially causing up to 9 relocations.

Source: Gold Line Foothill Extension – Pasadena to Montclair Final EIR (February 2007), Table 3-1.12

As a result of the Project Team's work on the Transit Oriented Development study, only one change may be required to the right-of-way requirements shown in the Final EIR document. It may be necessary to show a change to the acquisitions for the San Dimas station parking that would now be located to the east of where it was shown in the Final EIR document as a result of the proposed change in station location.

4.7 Park and Ride Recommendations

The Final EIR for the Gold Line Foothill Extension determined that a total of 8,150 parking spaces will be distributed among the 13 stations on the light rail transit system. The location and distribution of the parking locations as indicated in the FEIR are provided in the table below:

Station	Parking Location(s)	Number of Stalls
Pasadena	Existing structure	1,000
Arcadia	Parking structure at the northwest corner of Front Street and Santa Clara Street	800
Monrovia	The City is in the process of building 300 surface spaces at the southwest corner of E. Pomona Avenue and S. Myrtle Avenue. A future transit-oriented development on this site will include 600 parking spaces for transit users.	600
Duarte	North of E. Duarte Road, on a vacant lot south of Business Center Drive.	250
Irwindale	East of Irwindale Avenue and north of Montoya Street frontage road	700
Azusa/Alameda	Surface parking lot located north of the tracks, between Alameda and Azusa Avenues	400
Azusa/Citrus	North of the tracks, west of Citrus Avenue in a parking structure constructed in conjunction with a TOD project.	350
Glendora	North of the tracks, east of S. Vermont Avenue, on a trapezoidal plot of land where a future TOD project will provide 400 spaces for transit patrons.	400
San Dimas	Parking structure on the 2.9-acre Henkle & McCoy property at the northwest corner of Eucla and the railroad right-of-way.	750
La Verne	Surface lot on Fairplex land	600
Pomona	Parking structure (3-level) on a vacant lot, west of Garey, south of Bonita	800
Claremont	Parking structure on the existing Metrolink surface parking lot, east of College Avenue and north of the railroad right-of-way.	700
Montclair	Existing parking at the transit center will be utilized (no structure)	800
Total		**8,150**

Source: Gold Line Foothill Extension – Pasadena to Montclair Final EIR February 2007, Table 3-19.

As a result of the Project Team's work on the Transit Oriented Development study, only one change would be required to the parking locations shown in the Final EIR document. It would be necessary to show a change to the parking location for the San Dimas station parking that would now be located to the east of where it was shown in the Final EIR document as a result of the proposed change in station location.

5. Corridor Cities Opportunities and Recommendations

Each city in the San Gabriel Valley is in a different state of readiness to realize transit oriented development opportunities. Regardless of the individual readiness, the project team recommends the following steps to encourage TOD for each unique station along the corridor. Respecting the individuality of the each distinct corridor city, the Project Team recommends the following:

City of Arcadia Recommendations

The Project Team produced a Transit Plan and a Multi-Modal Transportation Framework focusing on connecting the regional anchors – the Racetrack and retail attractions – to the Gold Line station site. The framework serves as a guide to future development and may serve as an update to the circulation element. Urban design and transportation principles were used to evaluate and create defined linkages between the station, the arboretum, the racetrack, and Arcadia's downtown.

Based on the developed Transit Plan, the Project Team recommends the following steps for the City of Arcadia:

1. Create strategic transportation links between the Gold Line Arcadia station and key attractions in the City.
2. Implement a signage plan directing traffic from the I-210 freeway to access the station.
3. Provide a city-operated local shuttle bus service that links the station, with stops at the Shops at Santa Anita, the Westfield Mall, and the Los Angeles County Arboretum.

1. Work with Foothill Transit to modify the alignment of Bus Route 184 include a stop at the Gold Line station.

2. Widen the sidewalks along 1st Avenue to accommodate a bus pullout near the station.

3. Install pedestrian amenities such as shade trees, lighting, and signage along streets surrounding the Gold Line station. The city could consider extending the existing pedestrian street theme on Huntington Drive to the station area.

4. Implement bicycle lanes, bicycle routes, or bicycle boulevards on streets leading to the station.

Based on the Market Analysis, the Project Team recommends that the City of Arcadia:

1. Give careful planning consideration to parcels immediately adjacent to the station area. Parcels immediately adjacent to the station represent a significant opportunity for the City of Arcadia, but strong market pressures could compromise the long term potential for these sites by driving development to occur in the short term.

2. Consider a plan for the desired uses, intensities, and design of these parcels in order to ensure that the station area becomes fully integrated with the downtown.

City of Monrovia Recommendations

For Monrovia, the Project Team evaluated possible transit links for buses, pedestrians, and bicyclists to the connections between the proposed Gold Line station and downtown. The options include recommendations related to proposed pedestrian enhancements and streetscape improvements in order to reduce the barrier of the freeway and increase station visibility and connections.

The Project Team recommends that the City of Monrovia:

1. Enhance local transit services and provide transit connections to the Gold Line Monrovia station.
2. Market the current dial-a-ride service operated by the City of Monrovia as a transport mode for commuters to access the Gold Line station.
3. Explore the use of automated vehicle locating (AVL) devices for the dial-a-ride vehicles.
4. Explore opportunities for collaborative arrangements with key community stakeholders including the business and health care communities.
5. Consider phasing out the existing trolley service and reallocating those resources to provide local transit connections to the Gold Line rail station.

Based on the Market Analysis, the Project Team recommends that the City of Monrovia:

1. Invest in infrastructure improvements to improve pedestrian environment. The City of Monrovia should consider making infrastructure improvements to the site in order to ensure that pedestrian connectivity to the station is improved. These improvements include: construction of a cohesive street

network, traffic calming on Pomona Avenue and Myrtle Avenue, well located and designed transit parking, and improved pedestrian features such as widened sidewalks and internal pedestrian circulation in the new development.

2. Provide intermodal bus service from the station to the office parks on Huntington Drive and Old Town. Bus transit could offer intermodal access for employees in the City's auto oriented job corridor lining Huntington Drive. The link to Old Town could provide additional market opportunities for compact development.

Figure VI.3 – Alternative C : Full Service

City of Duarte Recommendations

The City of Duarte asked the Project Team to evaluate the possibilities and feasibility of a Village Concept north of the proposed station area. The team created a detailed urban concept consisting of two-dimensional site plans and three-dimensional sketch-up plans, and an implementation strategy is in the pipeline. The Project Team recommends that the City of Duarte:

1. Use the vision for the station area that has been developed to date to study several for land use and open space alternatives
2. Meet with Council and Planning Commission to discuss the alternatives
3. Work in partnership with the City of Hope Hospital, as the major stakeholder In the area, to develop the options, planning framework and implementation strategy
4. Set up a public forum for the public to comment on the development alternatives
5. Develop a planning framework, in terms of General Plan Amendment or new Area-Specific Plan and Zoning Code for proceeding
6. Set out a specific implementation strategy, including opportunities for public/private partnerships
7. Amend the General Plan and Zoning Code to permit the vision for the Station Area
8. Work with developers to implement the redevelopment of the area

Based on the Market Analysis, the Project Team recommends that the City of Duarte:

1. Explore strategies to encourage redevelopment on industrial sites to the north of the station. These strategies might include creating a redevelopment area that includes land to the north of the station, engaging in a public/private partnership for reuse of the industrial sites, or testing the market potential for new uses and rezoning the area to harness private market forces.

2. Rezone the current industrial land to allow for the redevelopment of the site to hospital related uses could help trigger changes that could make this station an employment destination in the corridor.

3. Work closely with the City of Hope to ensure that nearby uses support its development plans. Involve the City of Hope in future development plans in adjoining area to ensure that city and hospital expansion plans do not conflict with one another. Craft nearby development to support transit and consider impacts on future City of Hope expansion plans.

4. Offer shuttle access to employment areas that are outside of walking distance to the station area. Offering shuttle service from the station to jobs in Duarte that fall outside the half-mile station area will provide employees with better commute options and stimulate development in the station area.

City of Irwindale Recommendations

The Project Team developed a TOD plan for the industrial area surrounding the station location in Irwindale. The plan focused on the existing under utilized industrial/office uses within the station area and recommended higher and best uses for the intensification of the area. Urban design plans, two dimensional site plans and three-dimensional sketch-up plans, were created.

The Project Team recommends that the City of Irwindale:

1. Use the vision for the station area that has been developed to date to develop a vision for the re-use of the gravel pits on the north side of the 210 Freeway, which are the major redevelopment sites within the proposed station area.
2. Create urban design alternatives for the redevelopment of these major sites
3. Review the urban design alternatives with Council and Planning Commission
4. Examine pedestrian connection alternatives between the Gold Line station and the redevelopment sites, including a bridge and tunnel
5. Examine transit alternatives to connect the redevelopment sites to the Gold Line Station
6. Examine vehicular access alternatives for access to the major redevelopment sites
7. Set up a public forum for the public to comment on the alternatives
8. Develop a planning framework, in terms of General Plan Amendment or new Area-Specific Plan and Zoning Code for proceeding
9. Set out a specific implementation strategy, including opportunities for public/private partnerships

10. Amend the General Plan and Zoning Code to permit the vision for the redevelopment of the gravel pits

11. Work with developers to implement the redevelopment of the area

Based on the Market Analysis, the Project Team recommends that the City of Irwindale:

1. Consider this station for a major park-and-ride accessible by Interstate 210. This station could help divert parking needs from other stations that offer significant TOD potential.

2. Provide a shuttle service to major industrial employers may help boost ridership to and from the station.

City of Azusa Recommendations

The Project Team developed a comprehensive TOD Parking District Study for the City of Azusa. The Downtown TOD parking implementation strategy involves economic and market feasibility component of developing one or more parking structures in Downtown as well as other parking strategies. The strategy builds upon existing work products and takes it to the next level, including an updated analysis of the existing and future parking needs, an analysis of the most suitable locations for the parking structures), the cost for developing such a structure(s), anticipated time frames and phasing as to when a structure(s) would be needed, and provides an actual parking funding strategy. The Project Team recommends that the City of Azusa undertake the following next steps with regard to implementing the findings of this report:

1. Determine the scale and location of parking required to serve the Gold Line Alameda station and other adjacent TOD uses.

2. Determine the potential tolerance for introducing parking fees to help fund development and operating costs.

3. Undertake an analysis of properties potentially benefiting from the proposed parking strategy and determine whether a special assessment could represent an acceptable burden on the existing commercial base.

4. Consider in detail the most appropriate way to fund the provision of Gold Line-related parking which represents a broader benefit to the community.

Based on the Market Analysis, the Project Team recommends the following for the City of Azusa's Alameda Station:

1. Continue policy support for transit oriented development supportive uses. The implementation of TOD-supportive policies in the General Plan update is essential to laying the groundwork for guided development practices in Azusa.

2. Establish linkages between the station area and the downtown. Redevelopment plans for the downtown area will be instrumental in helping to ensure that good TOD occurs in the station area, and will create a positive symbiotic relationship between the downtown and station.

3. Secure vacant parcels surrounding the station area for TOD. Strategically acquire available parcels in the immediate station area to hold for TOD. Careful consideration of where the parking for transit users should go relative to the downtown and its effects on the station area's development pattern will be important in creating needed development intensities. If there is scattered ownership in the station area, parcel assembly may be necessary.

4. Provide a shuttle service to Azusa Pacific University. Further connections such as pedestrian, bicycle, and bus should also be considered between Azusa's universities and station areas.

The Project Team recommends the following for the City of Azusa's Citrus Station:

1. Improve access, specifically road and pedestrian access to Citrus College and Foothill Boulevard. By targeting the station area as a development node and laying a continuous street network throughout Rosedale and points south, Azusa Citrus will emerge as a successful transit-oriented district.

2. Work with Citrus College to ensure that students and employees have easy shuttle, bicycle, and pedestrian access to and from the university. The Azusa-Citrus station should focus its station area development on serving the needs of the residential and education communities. With good access, the station could serve as both an origin and destination station on the corridor.

City of Glendora Recommendations

Realizing the opportunity for intensification within their station area, the City of Glendora asked the Project Team to develop concepts for the intensification for their downtown village and existing suburban community. The TOD Studied specified studied the area north of the proposed transit station and developed schemes for intensification. These schemes and designs focus on making valuable and thoughtful connections between the downtown village and suburban community. The Project Team recommends that the City of Glendora:

1. Discuss the proposed urban design vision for the Gold Line Station area with City Council and Planning commission

2. Set up a public forum for the public to comment on the urban design vision

3. Develop a planning framework, in terms of General Plan Amendment or new Area-Specific Plan and Zoning Code for proceeding

4. Set out a specific implementation strategy, including opportunities for public/ private partnerships

5. Amend the General Plan and Zoning Code to permit the urban design vision for the Station Area

6. Work with developers to implement the redevelopment of the area

Based on the Market Analysis, the Project Team recommends that the City of Glendora:

1. Offer TOD-supportive land use and design policies. Because the timing of the market for transit-oriented uses may not coincide with the phasing of the station area, future policies should ensure that the long-term development of key opportunity sites is reserved for transit-oriented designs and uses. Guiding future development and policies to reflect the city's desire for TOD will be instrumental in laying the groundwork for this development site.

2. Improve pedestrian and bicycle access from the station to Alosta Avenue. In spite of its auto-orientation, Alosta Avenue provides key walking access to shopping and services for potential station area residents. To the extent possible, future plans for development on Alosta Avenue should include direct pedestrian cut-throughs from the station area.

3. Encourage developers to provide a grocery store as part of redevelopment plans, which would encourage transit oriented development further.

Existing Conditions along Glendora Avenue

Glendora Avenue Potential

City of San Dimas Recommendations

The City of San Dimas proposed a new station area in the process. The feasibility of the station location request was evaluated. The Relocation Study examined the TOD potential for a new station area, including two and three dimensional plans, demonstrating the new location's ability to be integrated within the community. The Project Team recommends that the City of San Dimas:

1. Staff should meet with Council and Planning Commission to discuss the proposed urban design vision for the new Gold Line Station area
2. Work with the Metro Gold Line Authority to revise the station location in the FEIS in the context of further revisions to the document
3. Set up a public forum for the public to comment on the urban design vision
4. Develop a planning framework, in terms of General Plan Amendment or new Area-Specific Plan and Zoning Code for proceeding
5. Set out a specific implementation strategy, including opportunities for public/ private partnerships
6. Amend the General Plan and Zoning Code to permit the urban design vision for the Station Area
7. Work with developers to implement the redevelopment of the area

Based on the Market Analysis, the Project Team recommends that the City of San Dimas:

1. Incorporate the vision for the new station area into the new downtown plan, with particular emphasis on encouraging access from the station to the downtown.

San Dimas Station Area Vision

City of La Verne Recommendations

The City of La Verne requested a transportation plan, focusing on vehicular circulation on Arrow Highway, and a peer review for their station area plan prepared by the Arroyo Group. The transportation plan focused on existing and anticipated roadway demand and will incorporate recommendations for all modes of traffic focusing on enhancing specific implementation policies and multi-modal recommendations – the auto circulation, transit modes, bike, and pedestrian circulation. The IBI Group has also provided a full review of The Arroyo Group's report. The Project Team recommends that the City of La Verne:

1. Implement guide signs along Arrow Highway and White Avenue to direct vehicles to the Gold Line station, passenger drop-off zones, parking facilities, and the SR-210 and I-10 freeways.

2. Inform the local community of traffic calming options during the planning and construction phases of the Gold Line Foothill Extension.

3. Establish a process for initiating and evaluating neighborhood traffic calming measures.

4. Consider developing a Transit Center near the Gold Line La Verne station to provide a nexus between multiple transit modes.

Based on the Market Analysis, the Project Team recommends that the City of La Verne:

1. Create linkages between the station, downtown La Verne, the University, and the Fairplex. TOD opportunities near the La Verne station will be longer term. However, the station offers many immediate amenities for transit riders including the downtown commercial area, the University of La Verne, and events at the Fairplex. The current planning policy efforts should include policies targeting development around the station and improving linkages between these three areas.

2. Provide incentives for TOD supportive growth and planning at the University of La Verne. The city should work with the University to establish a common vision for incorporating transit into their long range plans.

Existing Conditions along First Avenue, La Verne

First Avenue Potential, La Verne

City of Pomona Recommendations

For the City of Pomona the Project Team developed a station area vision reevaluating land uses which focused compact development in and around the station area. The concepts encouraged the intensification of residential and commercial uses with the goal of implementing transit oriented development around the station area. The Project Team recommends the following action steps for the City of Pomona:

1. City staff should meet with Council and Planning Commission to discuss the proposed urban design vision for the Gold Line Station area
2. Set up a public forum for the public to comment on the urban design vision
3. Develop a planning framework, in terms of General Plan Amendment or new Area-Specific Plan and Zoning Code for proceeding
4. Set out a specific implementation strategy, including opportunities for public/ private partnerships
5. Amend the General Plan and Zoning Code to permit the urban design vision for the Station Area
6. Work with developers to implement the redevelopment of the area

Based on the Market Analysis, the Project Team recommends that the City of Pomona:

1. Acquire vacant parcels around the station. One of the immediate parking lots has already been acquired for development. Ensuring control of the other vacant parcels is important to maintaining the land needed for a critical mass of new TOD.

Station Area Potential

City of Claremont Recommendations

The City of Claremont utilized the team's transit expertise and commissioned studies to evaluate the Claremont Cambridge Crossing Closure and Parking Study. The Project Team evaluated conditions along the Cambridge Avenue closure compared to conditions without the closure to determine the impacts to vehicular level of service, emergency vehicle response times, pedestrian access, and socioeconomic conditions. Based on the Transit Studies, the Project Team recommends the following action steps for the City of Claremont:

1. Investigate the opportunities associated with constructing a parking structure with ground floor retail to serve the Gold Line Claremont station.

2. Encourage mixed-use development on parcels adjacent to the parking structure and the station.

3. Continue to have dialogue with the California Public Utilities Commission regarding the proposed closing the Cambridge Avenue grade crossing.

Based on the Market Analysis, the Project Team recommends that the City of Claremont:

1. Encourage connections between the Claremont station and neighboring stations, to help these areas capitalize on the strong real estate market and limited land availability in the Downtown.

City of Montclair Recommendations

The Montclair station location is unique. The future station will serve both the existing Metro Link stop and the Gold Line station. This duel station location is land locked between large areas of surface parking. Montclair saw the development potential in their parking lots. The project team considered parking strategies and developed a plan to encourage Parking Assessment Study Develop a detailed Parking Assessment Study focused on phasing and feasibility of designated parking land for conversion to other uses. The Team will evaluate the current and future parking demand and create a phased structured parking strategy to accommodate future development. The Project Team recommends that the City of Montclair:

1. Invest in parking structures to encourage higher density mixed-use development in the downtown area.

2. Create a financial plan, such as a Communities Facilities District, to fund future parking improvements.

Based on the Market Analysis, the Project Team recommends that the City of Montclair:

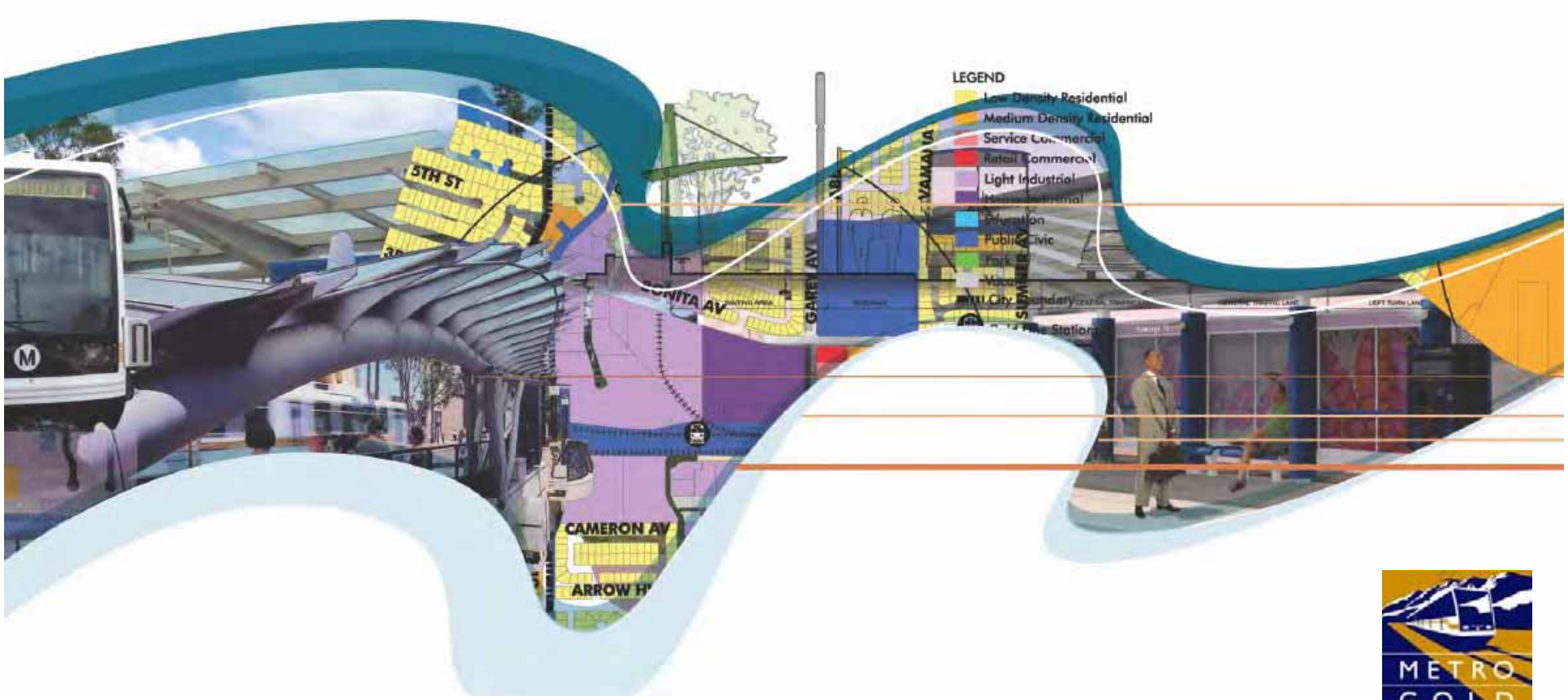
1. Continue to support the funding of necessary infrastructure improvements in the station area. This strong public message supporting TOD will heighten the visibility of this station for TOD, and encourage local developers.

2. Improve connections to the City's major retail areas. The City's specific plan calls for improving visual and pedestrian connections to retail areas. This will further stimulate TOD by enabling potential residents to access shopping and services on foot.

3. Consider parking management through the use of parking restrictions, parking meters, and longer term paid parking to generate funds and maintain high parking turnover rates along retail corridors.

Metro Gold Line Foothill Extension
TRANSIT ORIENTED DEVELOPMENT POTENTIAL

enhancing downtowns, creating destinations, and boosting economic development in the San Gabriel Valley



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METRO GOLD LINE FOOTHILL EXTENSION

FTA-FUNDED STUDY OF FOOTHILL EXTENSION TRANSIT ORIENTED DEVELOPMENT POTENTIAL

Transit Oriented Development (TOD) has evolved over time along the first phase of the Gold Line

The extension corridor offers unique opportunities for planned growth

There is enthusiastic support for TOD from the extension communities

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THE FOOTHILL EXTENSION IS UNIQUE AMONG TRANSIT PROJECTS

The Foothill Extension has the potential to **fundamentally change existing land use** patterns

This change can happen without encroaching on existing neighborhoods

The change in land use will encourage ridership and reduce congestion

The economic benefit to the community is significant

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REFOCUSING LAND USES

Mission Meridian TOD before

South Pasadena has an overall density **5** du/units per acre

Retail along the Mission Corridor has struggled

REFOCUSING LAND USES

Mission Meridian TOD after

Project density **45** DU/acre

Thriving retail & restaurant environment

South Pasadena is now reconsidering land use along Mission

MISSION MERIDIAN TOD

TOD SUCCESS ALONG THE EXISTING GOLD LINE

Successful model of integrating higher density into a suburban community

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DEL MAR STATION

TOD SUCCESS ALONG THE EXISTING GOLD LINE

Pasadena Place

Palermo

Archstone Del Mar Station

DeLacey at Green

Messina

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Gold Line Station Location

FLORES DEL VALLE/AVENUE 26

An 533 unit housing development, including 146 units of affordable housing

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COMMERCIAL ROOFTOPS PASADENA

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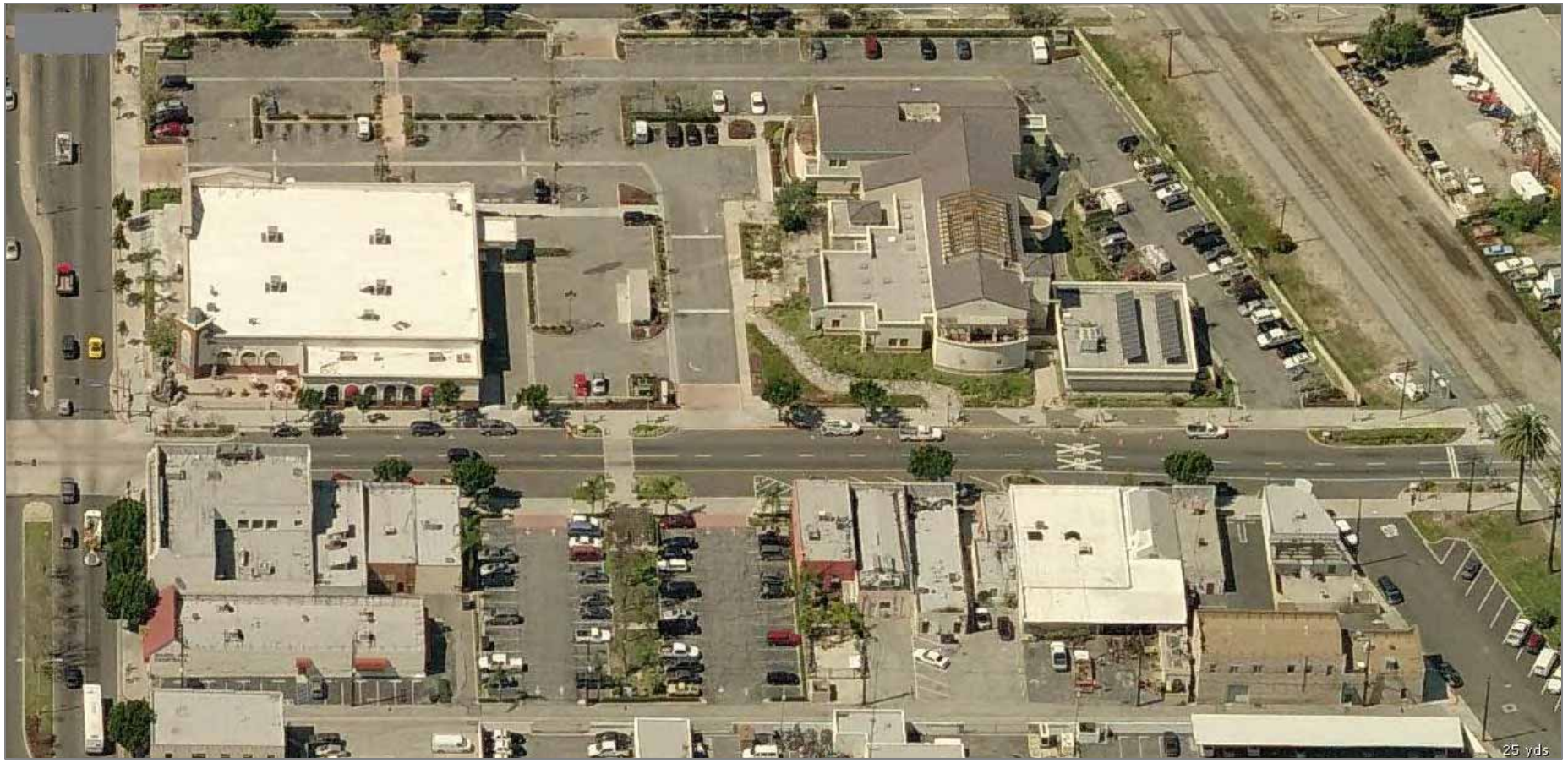
COMMERCIAL ROOFTOPS AZUSA



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RESIDENTIAL ROOFTOPS PASADENA

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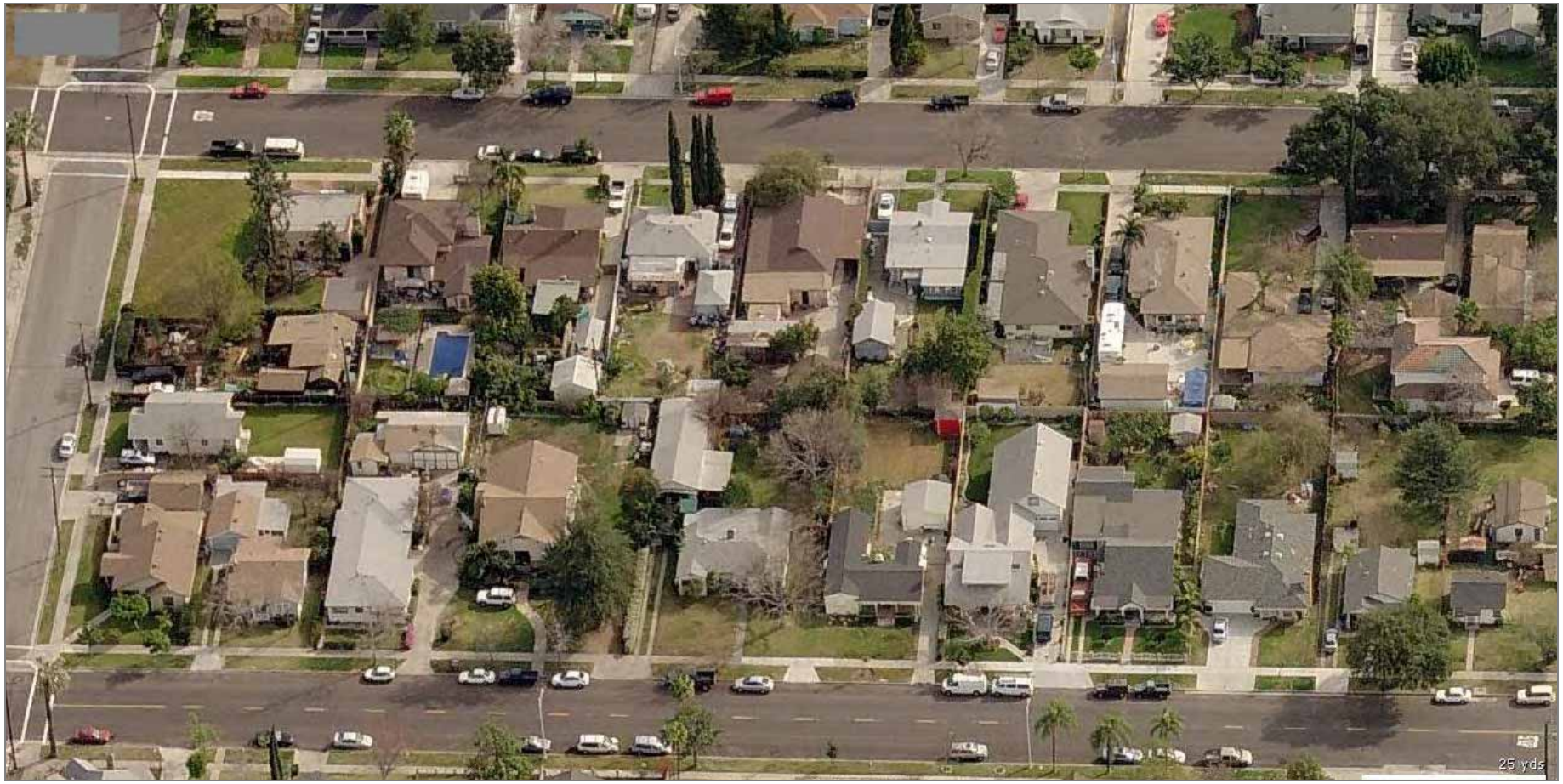
RESIDENTIAL ROOFTOPS AZUSA



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FOOTHILL EXTENSION TOD

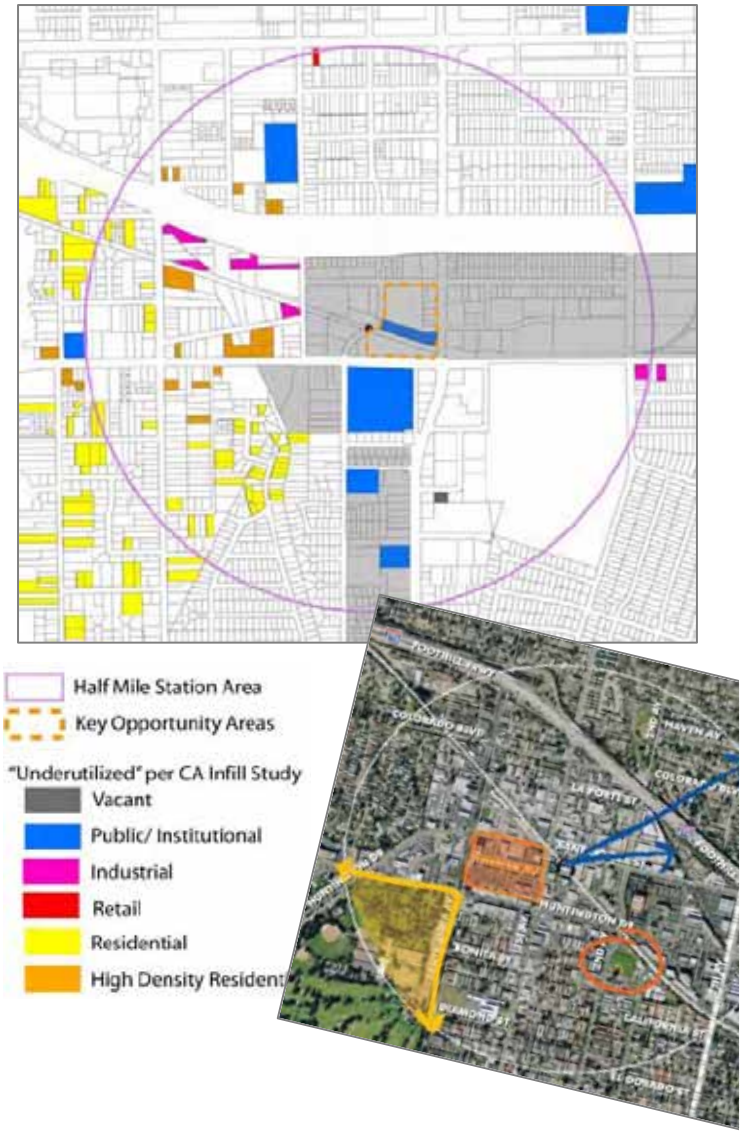
CORRIDOR STUDY

GOALS & OBJECTIVES

Assess the potential for future development around transit stations (TOD)

Work with cities to enhance transit oriented development planning efforts

Quantify the economic development benefits associated with corridor development



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CORRIDOR STUDY
MULTIDISCIPLINARY TEAM APPROACH

THE PROJECT TEAM:

IBI GROUP

STRATEGIC ECONOMICS

RECONNECTING AMERICA
CENTER FOR TRANSIT-ORIENTED DEVELOPMENT

MELÉNDREZ

ARELLANO ASSOCIATES

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CORRIDOR STUDY

"HANDS ON" APPROACH TO TOD

Tours of Portland to show TOD in urban and suburban contexts

Attended by Corridor City staff and electeds

Experienced a wide range of projects

Talked with developers, city officials and stakeholders to learn what worked and what didn't work

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FOOTHILL CORRIDOR STUDY

"HANDS ON" APPROACH TO TOD

Encouraged "peer to peer" conversations about TOD potential and implementation

Effort is complementary to SCAG Compass Study and Caltrans Transportation Planning Grant

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UNPRECEDENTED CORRIDOR VIEW OF TRANSIT ORIENTED DEVELOPMENT

Each of the eleven Corridor cities is encouraged to develop a unique vision of TOD that:

Maintains local character

Accommodates future growth

Achieves local goals

Claremont's Residential Project

Azusa's Rosedale Project

San Dimas' Fox Development

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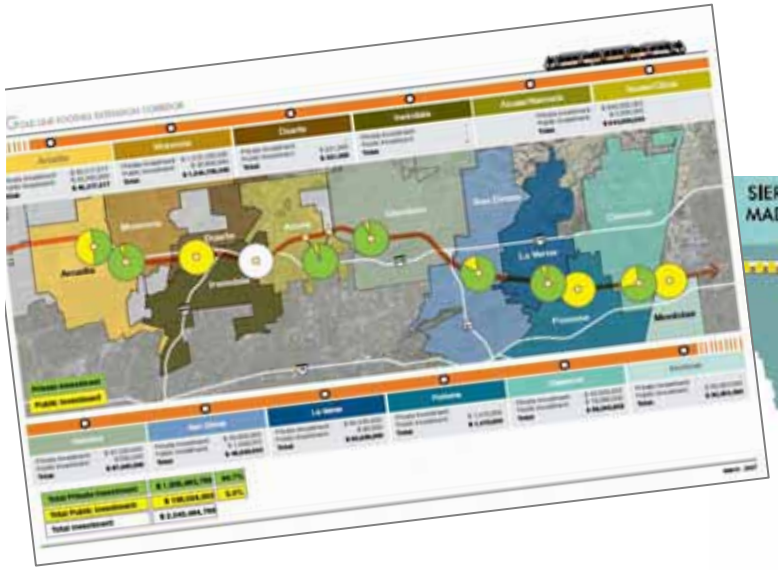
CORRIDOR STUDY

MARKET APPROACH TO TOD

The Market Study considered development potential along the extension.

- Evaluated the synergies between land uses at each station
- Considered the context of the entire San Gabriel Valley



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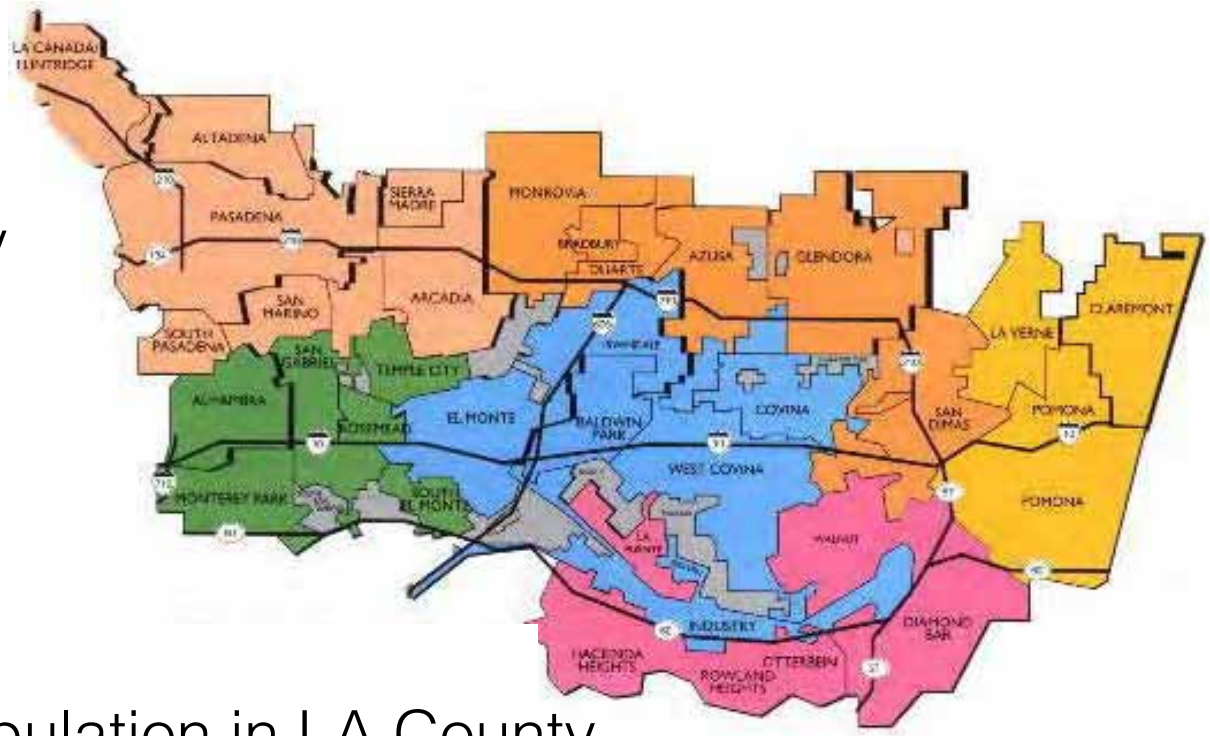
THE SAN GABRIEL VALLEY IN CONTEXT

The San Gabriel Valley is a vital part of the region with:



1.9 million residents
19 percent of the population in LA County
784,000 jobs
18 percent of jobs in LA County

***SCAG 2007 Projections**

THE CORRIDOR ON THE REGIONAL SCALE

The Foothill Extension is part of a multi-pronged approach to manage future congestion in the critical path of Los Angeles' Growth:

Freeways, Metrolink Commuter Rail, and Light Rail

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EXISTING EMPLOYMENT

There are over 115,000 jobs in Pasadena and an additional **213,000 jobs** in Foothill Extension Cities

123,000 of the jobs along the Extension corridor are within **2 miles** from stations

FUTURE EMPLOYMENT

In 2035, there will be over **262,000 jobs** along the extension corridor.

Our study shows that **50%** of the projected job growth can be accommodated within walking distance of the corridor stations.

EXISTING POPULATION

Currently, there are **over 1.9 million residents** within in the San Gabriel Valley.

FUTURE POPULATION

By 2035, the population of the SGV will be **2.5 million**

The 600,000 person increase of population is equivalent to more than **4** times the current population of Pasadena




DEVELOPMENT POTENTIAL

The corridor can absorb **significant** infill development potential:

1,200 acres of opportunity sites

Roughly equivalent to….

The size of

Downtown Los Angeles

ACCOMMODATING PROJECTED GROWTH NEAR TRANSIT

Our study indicates that station area development opportunities can conservatively accommodate…

17,000 housing units

3 million square feet of retail space

7.5 million square feet of office space

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ECONOMIC BENEFITS OF TOD ARE SIGNIFICANT

Projected Economic Impact:

New private development benefits valued at over **$36 billion**

Up to **$6.2 billion** in total new household spending through 2030

Up to **$1.3 billion** in total property tax contributions from 2008-2030

Up to **$114 million** in total sales tax revenue increases by 2030

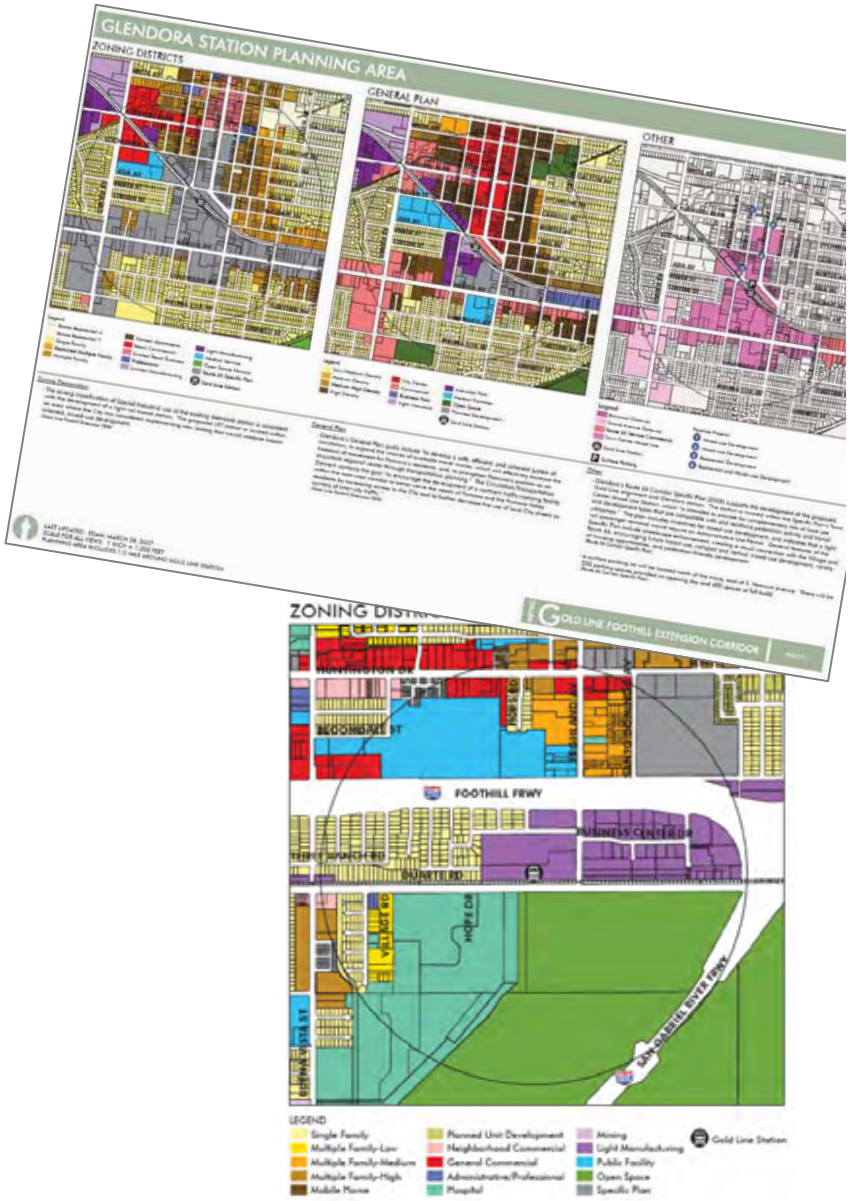
CURRENT CITY EFFORTS

Planned TOD Developments in:

- Claremont
- La Verne
- Azusa
- San Dimas
- Monrovia

Tremendous 'buy-in' from regional players such as:

- Fairplex
- City of Hope
- University of La Verne
- Azusa Pacific University
- Claremont Colleges



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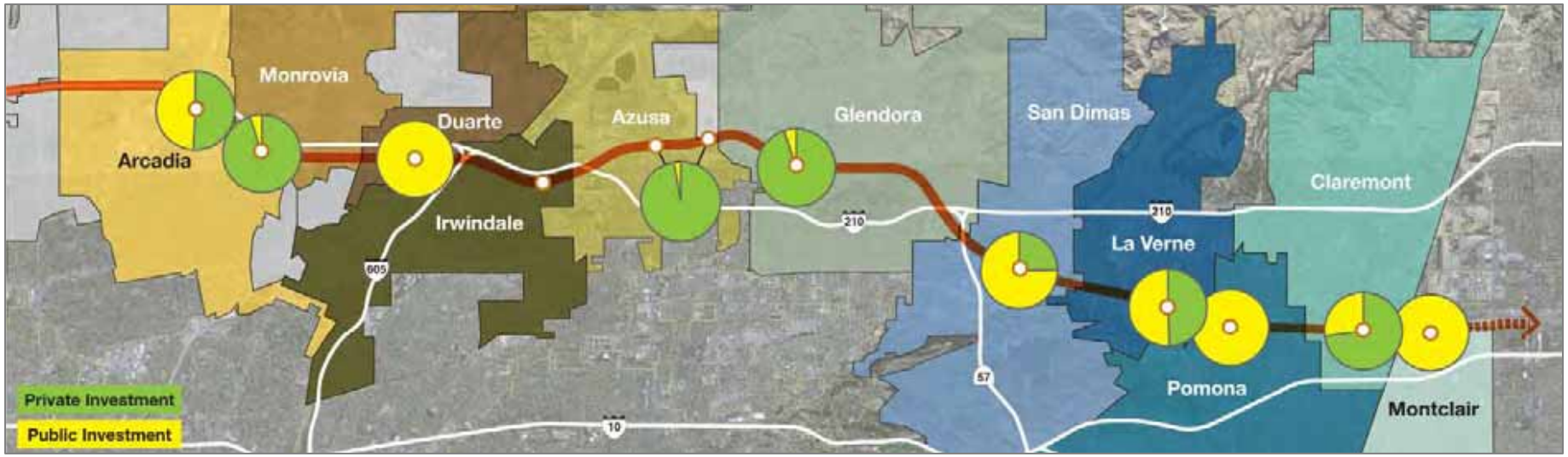
INVESTMENTS ARE ALREADY IN PLACE

SGV Cities and the local development community understand the impact of the Extension and are planning new **compact, diverse** & **mixed-use** development around station areas.

Over **$2 billion dollars** of private investment have already been committed to corridor TOD projects.



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CORRIDOR CITIES HAVE DIFFERENT VISIONS

Corridor city planning visions fall into three categories:

Revitalized downtowns

New places and communities

Regional destinations

REVITALIZED DOWNTOWNS

San Dimas Station Area Improvements

San Dimas is improving their downtown by concentrating development adjacent to the station area.

"The San Dimas Grove Station Project **exemplifies Compass Principles** by providing higher density housing close to job centers, and transit-oriented development around the potential location of a future Gold Line station."
- SCAG

Grove Station, San Dimas

REVITALIZED DOWNTOWNS

Claremont's Downtown Village

Claremont is improving their downtown by concentrating development adjacent to their station areas.

Claremont's Packing House – Adaptive Mixed Use

Claremont's Indian Hill Development

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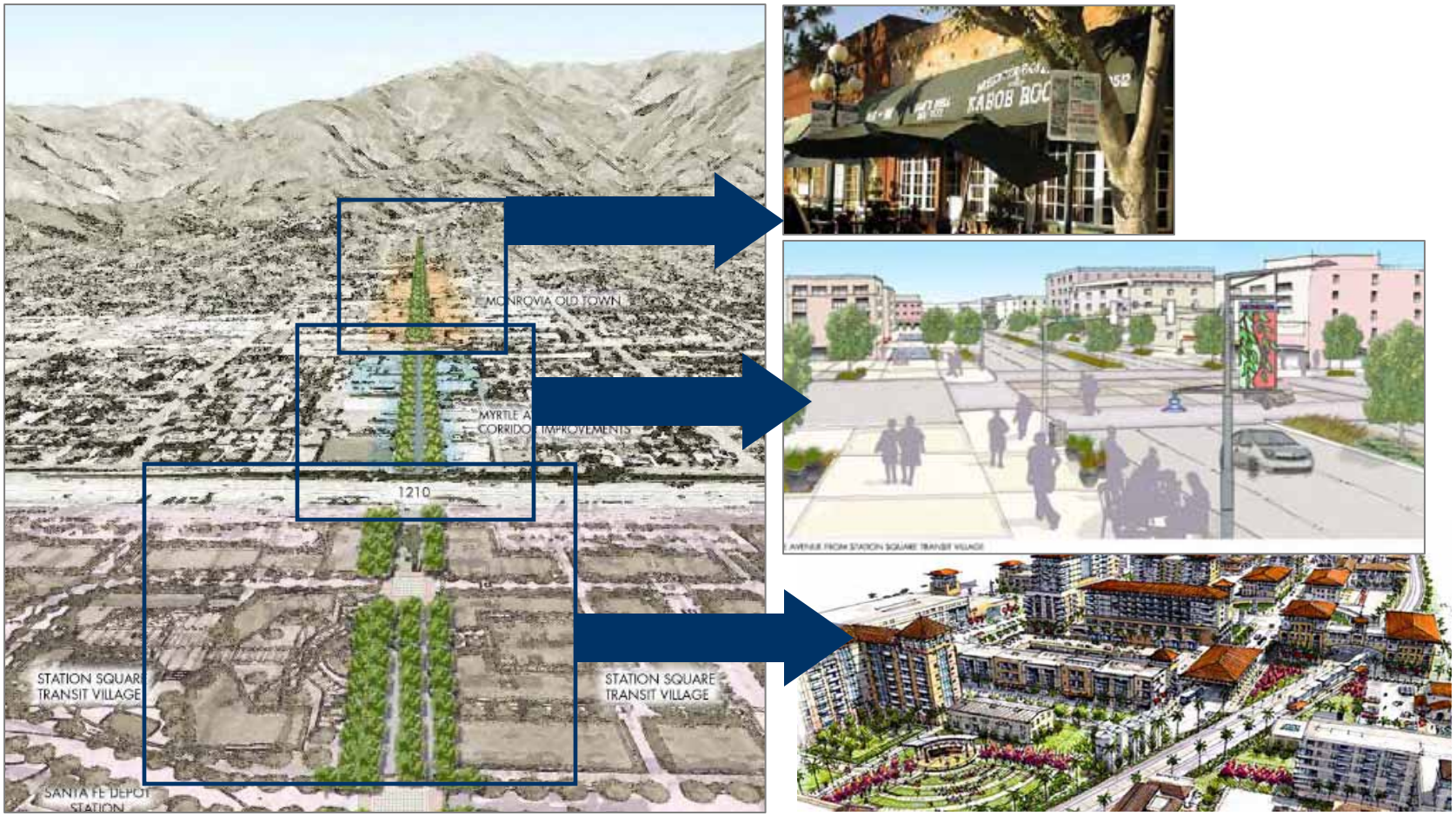
REVITALIZED DOWNTOWNS

Monrovia Station Area

Linking Monrovia's Station Square to the Old Town Village



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REVITALIZED DOWNTOWNS

Glendora Station Area Conceptual Plan

The team is currently studying the potential for more intensive development in the area between the station and Glendora's thriving downtown.

Preliminary Estimates are:

- Over 700 Residential Units
- 100,000 sq. ft. of Retail/Commercial

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REVITALIZED DOWNTOWNS

Azusa's Downtown Revitalization

The city is revitalizing their existing Downtown and constructing a new community.

Rosedale is a 1,250-home master planned community with the Gold Line station at the south.

Azusa's Village Center

Rosedale Residence

Rosedale's Ground Breaking

NEW PLACES & COMMUNITIES

Duarte's Vision

CITY OF HOPE

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NEW PLACES & COMMUNITIES

Duarte's Vision

The project team has created a vision to provide compact mixed-use development for the area surrounding the City of Hope Medical Facilities.

City of Hope

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NEW PLACES & COMMUNITIES

Monrovia Station Square

850,000 sq. ft. Office Space

1,400 Residential Units

250 Room Hotel

Retail & Commercial Opportunities

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REGIONAL DESTINATIONS

Arcadia

- Santa Anita Racetrack
- Westfield Mall
- Proposed Caruso Mall
- LA County Arboretum

Santa Anita Racetrack

The Proposed Caruso Project

The Shops at Santa Anita Park

REGIONAL DESTINATIONS

Irwindale

Regional Retail Development

The City has zoned and is developing a Retail Vision which will include:

- Immediate access to the 210 and 605
- Station area proximity (within the ¼ mile)
- The retail center as a regional destination

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INSTITUTIONS & EDUCATION

There are over **28,000 students** and **3,500 faculty/staff** are within a half mile radius of station areas

REGIONAL DESTINATIONS

Other regional attractions reinforce the importance of the corridor

- The Fairplex
- Universities
  - The Claremont Colleges
  - University of La Verne
  - Citrus College
  - Azusa Pacific University
- Ontario Airport

CONCLUSIONS

The Gold Line extension is **ready for construction, key regional stakeholders are eager,** and the **communities are waiting.**

The Gold Line Extension has the potential to radically change land use and provide much needed housing within the San Gabriel Valley.

Compact growth is beneficial to the region's economics, environment, and citizens.

Cities are already creating development supporting the new corridor and light rail oriented.

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History of Ridership Forecasts

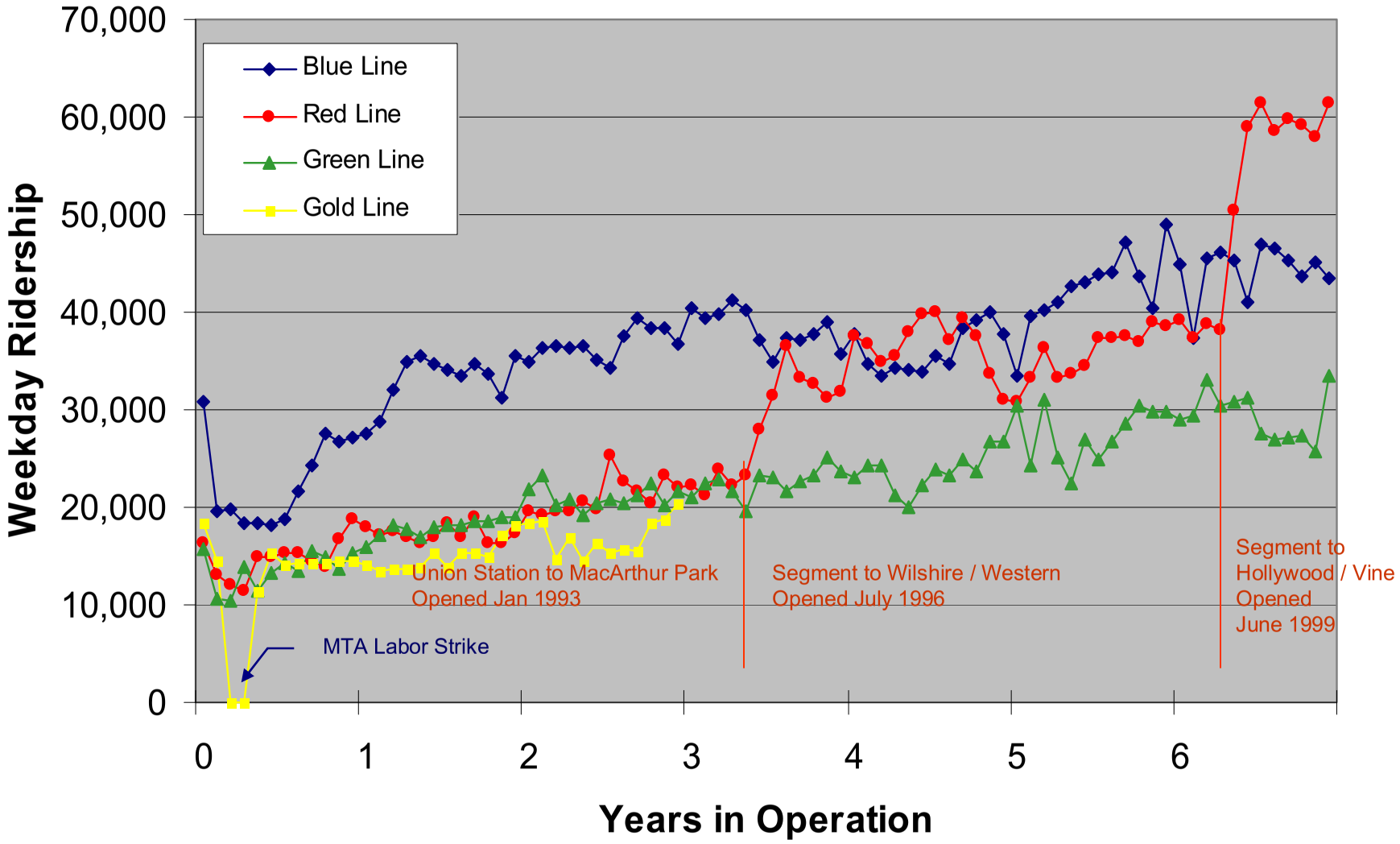
For the Metro Gold Line – Union Station to Sierra Madre Villa

Year	Source	Ridership	Headway
February 1990	Final Environmental Impact Report Generated by SCAG (Year of operation not designated)	64,300	4 minutes
March 1999	Metro Blue Line Construction Authority Preliminary Project Implementation Plan 2003: Opening Year	38,000	8 -10 minutes
October 1999	**LACMTA Operational Plan** **for Pasadena Metro Blue Line** **2003: Opening Year** **2010**	 **19,300** **26,050**	 **7.5 minutes** **7.5 minutes**
July 2004	Actual Weekday Boardings - MTA	14,565	10 minutes
July 2005	Actual Weekday Boardings - MTA	18,245	10 minutes
July 2006	Actual Weekday Boardings - MTA	20,300	10 minutes

Note: Actual Service in 2004 and 2005 is approximately 40% less than assumed and budgeted for in the 1999 MTA Operating Plan.

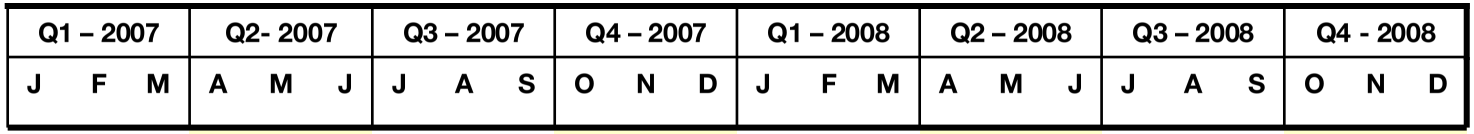
Comparing Metro Ridership

Red, Blue, Green, Gold



Project	Destination	Cost / per mile	Status	Completion Date
Gold Line Foothill	**Azusa**	$400 Million / $33	**Ready**	**2011**
Eastside Light Rail	Boyle Heights	$899 million / $150	Under construction	2010
Expo Light Rail I	Culver City	$640 million / $75	Under construction	2010
Expo Light Rail II	Santa Monica	$750 million / $95	Environmental review process, estimated to take 3 years	2015
West Valley – N/S Busway	Canoga Park	$245 million	In planning	Not determined
Wilshire Subway	Santa Monica	Est $5 billion	Under study	Not determined
Crenshaw Line	South Los Angeles	$550 million – BRT $1.1 billion - LRT	Under study	Not determined
Downtown LA Connector	Union Station	Est $1.5 billion	Under study	Not determined
Wilshire Blvd Busway	Santa Monica	$124 million	Under study	2013

Phase 2A to Azusa – Project Schedule



Preliminary Engineering (PE)

- Submit PE Application to FTA
- FTA Response/Approval of Application

Record of Decision (ROD)

- Submit FEIS/R Document to FTA
- FEIS/NOA and 30-day Public Comment Period
- Board Approves to seek ROD
- Seek ROD from FTA
- FTA approves ROD

Final Design (FD)

- Submit 5309 (FD) Application to FTA
- FTA Response/Approval of Application

Full-Funding Grant Agreement (FFGA)

- Submit FFGA Application to FTA
- FTA Approves FFGA
- FFGA Signature

Design Build (DB)

- DB Procurement Phase 2A
- Recommend Award DB
- Phase 2A Notice to Proceed

Phase 2A Substantial Completion — July 2011

Phase 2A Revenue Operations — October 2011

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Total Project Budget

Los Angeles to Montclair Project Budget (today's costs / includes maintenance facility):

Phase 1	$ 774,600,000
Phase 2A Azusa Budget:	$ 400,000,000
Phase 2B Montclair Budget:	$ 763,000,000
TOTAL	$ 1,937,600.000

2002 — 2006/7 — 2014

Fully Funded: $27 Million

Alternatives Analysis → Draft EIS/R → Locally Preferred Alternative → Project Definition Report → Advanced Conceptual Engineering → Final EIS/ EIR

Revenue Sources:	
SCAG	$ 1,000
Interest Income	$ 1,190
Bridge Income	$ 13,910
Phase I Carry Over	$ 4,000
Federal TCSP	$ 2,900
Federal New Starts (2004)	$ 4,000

Pending FTA Full Funding Grant Agreement

Construction Bid Document → Real Estate/ Other Purchases → Construction

Revenue Sources:	
Interest Income	$ 850
Cities	$ 11,000
Real Estate	$ 53,600
Federal Intermodal	$ 12,500
Federal New Starts	$ 825,650
State	$ 75,100
LACMTA	$ 122,300
Phase I Expenditure Match	$ 731,000
SANBAG	$ 35,000
Phase I Real Estate	$ 43,600

Strengthening the Regional Airport Network

Photographs by Karen Tapia-Andersen Los Angeles Times

The mayor's flying carpet

Los Angeles Mayor Antonio Villaraigosa, above left, helps roll out the red carpet Monday at LA/Ontario International Airport before announcing that ExpressJet will add 19 nonstop flights serving 14 cities. Villaraigosa, who helped direct an ExpressJet, right, also announced that LA/Palmdale Regional Airport will start new jet service June 7 when United Airlines begins flying to San Francisco International Airport.

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Ontario Airport Link

- ✓ Responds to Los Angeles World Airport's objective to strengthen and expand the regional airport network, with an emphasis on expanded passenger service
- ✓ Responds to comments from the project's Draft EIS /EIR public hearing process
- ✓ Ontario Airport is currently in a major expansion planning mode: their Master Plan will guide development through 2030.
- ✓ Ontario Airport Link feasibility study is being formulated for inclusion within project's environmental review process.

Travel Time Forecast to Airport:	Express	Regular
Union Station	60 min.	75 min.
Mission Station	48 min.	61 min.
Del Mar Station	44 min.	56 min.
Sierra Madre Villa Station	35 min.	45 min.
Azusa Citrus Station	23 min.	28 min.
Montclair Station	10 min.	10 min.

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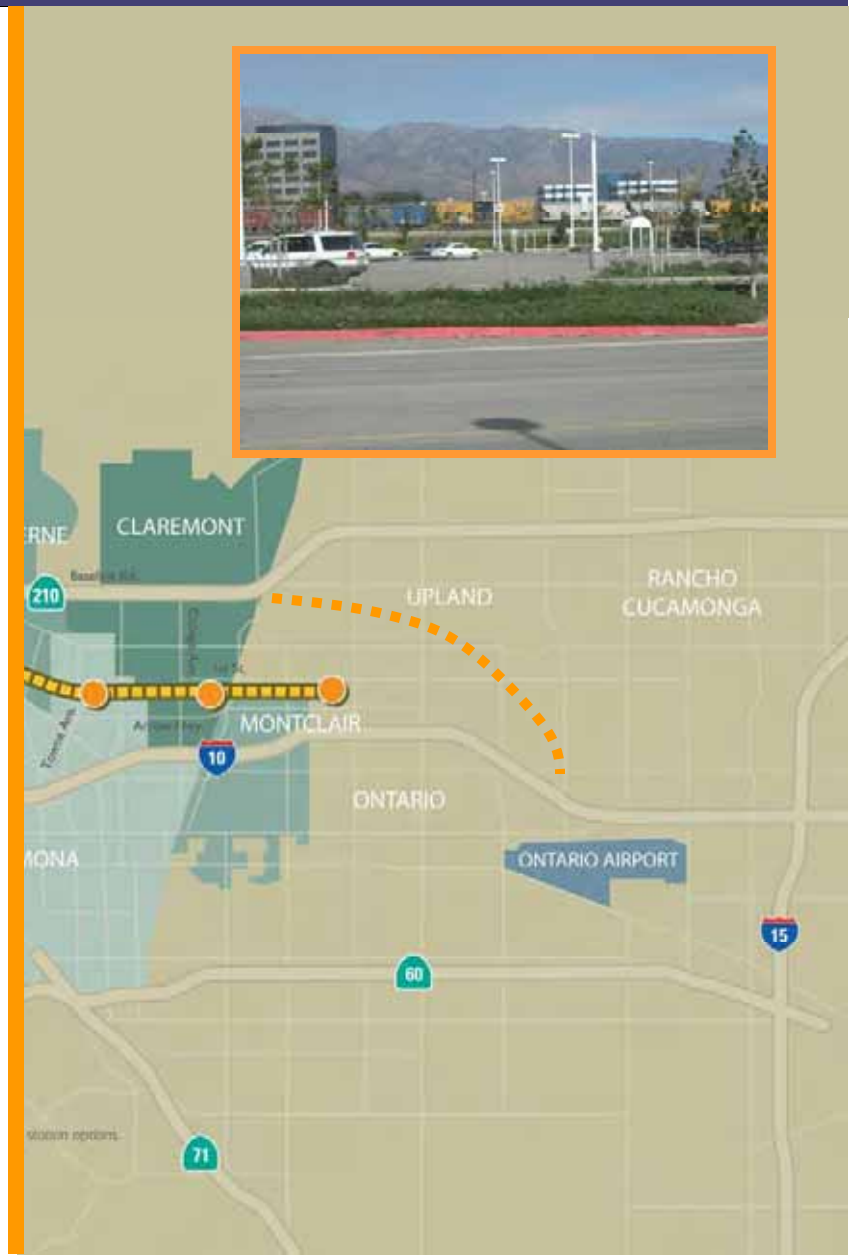
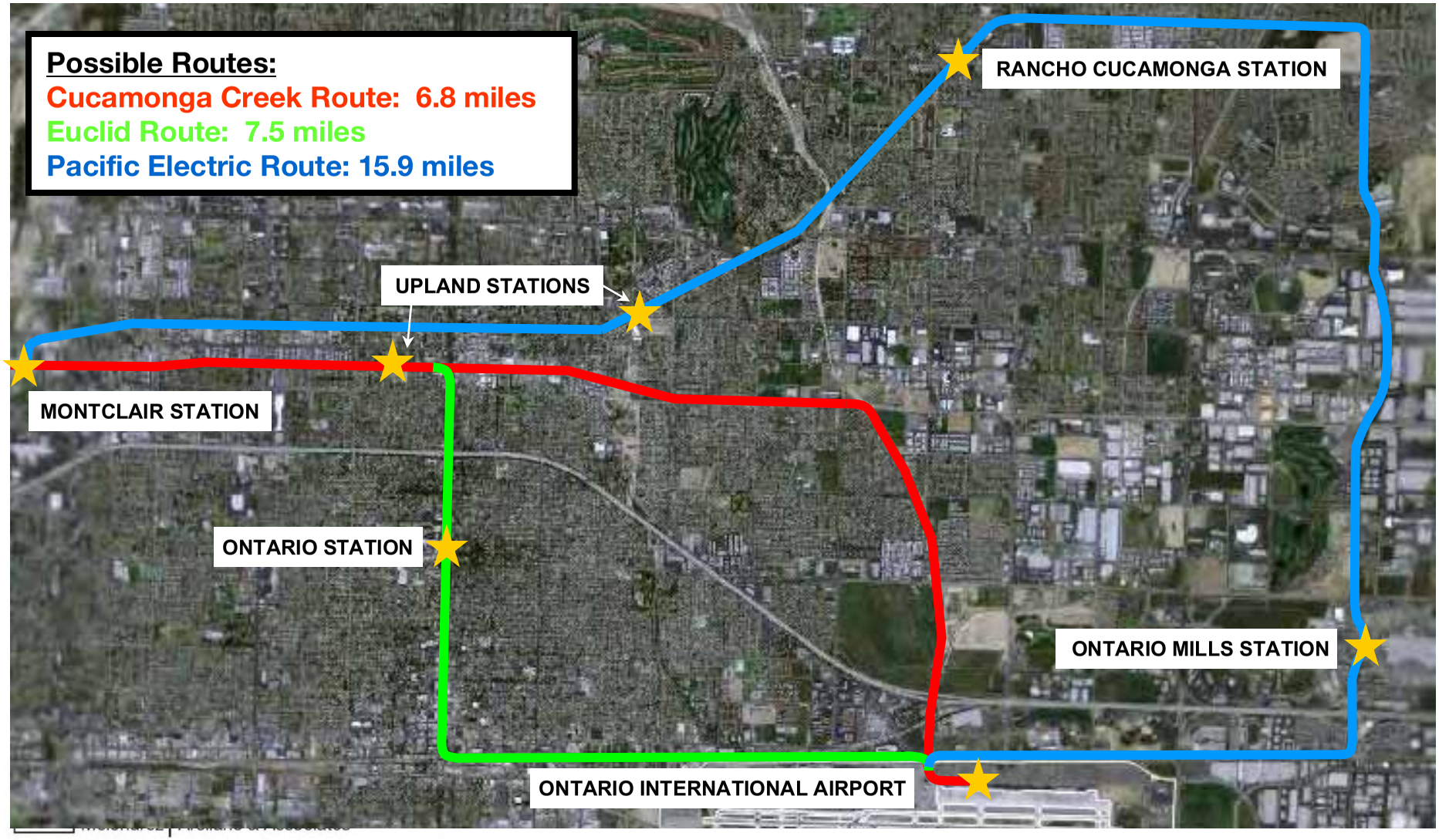


Potential Routes and Stations to Ontario International Airport



Readers' Guide:

This chapter includes a financial plan, which is different from the one presented in the 2004 Draft EIR/EIS. The financial plan is not required under the California Environmental Quality Act for an EIR. The Construction Authority has opted to retain this information for the benefit of readers of and commenters on the draft environmental document who may be interested in this issue. Note that actual funding for the project may be different from this plan, reflective of ongoing changes in available and potential funding sources.

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CHAPTER 5 - FINANCIAL ANALYSIS

Changes Since the Draft EIS/EIR

Subsequent to the release of the Draft EIS/EIR in April 2004, the Gold Line Phase II project has undergone several updates:

Name Change: To avoid confusion expressed about the terminology used in the Draft EIS/EIR (e.g., Phase I; Phase II, Segments 1 and 2), the proposed project is referred to in the Final EIS/EIR as the Gold Line Foothill Extension.

Selection of a Locally Preferred Alternative and Updated Project Definition: Following the release of the Draft EIS/EIR, the public comment period, and input from the cities along the alignment, the Construction Authority Board approved a Locally Preferred Alternative (LPA) in August 2004. This LPA included the Triple Track Alternative (2 LRT and 1 freight track) that was defined and evaluated in the Draft EIS/EIR, a station in each city, and the location of the Maintenance and Operations Facility. Segment 1 was changed to extend eastward to Azusa. A Project Definition Report (PDR) was prepared to define refined station and parking lot locations, grade crossings and two rail grade separations, and traction power substation locations. The Final EIS/EIR and engineering work that support the Final EIS/EIR are based on the project as identified in the Final PDR (March 2005), with the following modifications. Following the PDR, the Construction Authority Board approved a Revised LPA in June 2005. Between March and August 2005, station options in Arcadia and Claremont were added.

Changes in the Discussions: To make the Final EIS/EIR more reader-friendly, the following format and text changes have been made:

Discussion of a Transportation Systems Management (TSM) Alternative has been deleted since the LPA decision in August 2004 eliminated it as a potential preferred alternative.

Discussions of the LRT Alternatives have eliminated the breakout of the two track configurations used in the Draft EIS/EIR (Double Track and Triple Track). The Final EIS/EIR reports the impacts of a modified triple track configuration (2 LRT tracks and 1 freight track with two rail grade separations) but focuses on the phasing/geographic boundaries included in the LPA decisions.

Two LRT alternatives in the Final EIS/EIR are discussed under the general heading "Build Alternatives," and are defined as:

1. Full Build (Pasadena to Montclair) Alternative: This alternative would extend LRT service from the existing Sierra Madre Villa Station in Pasadena through the cities of Arcadia, Monrovia, Duarte, Irwindale, Azusa, Glendora, San Dimas, La Verne, Pomona, and Claremont, terminating in Montclair. The cities from Pasadena to Azusa are also referred to in the Final EIS/EIR as Segment 1. The cities from Glendora to Montclair are also referred to in the Final EIS/EIR as Segment 2. Key changes from the Draft EIS/EIR are the inclusion of Azusa in Segment 1, the elimination of the Pacific Electric right-of-way option between Claremont and Montclair, the inclusion of a 24-acre Maintenance and Operations facility in Irwindale (the site is smaller than in the Draft EIS/EIR), and the addition of two rail grade separations. Note that the Maintenance and Operations Facility is located in Segment 1 but is part of the Full Build Alternative. In other words, it would not be constructed as an element of the Build LRT to Azusa Alternative (described below). The length of the alternative is

approximately 24 miles. One station (and parking) would be located in each city, except for Azusa, which would have two. There are two options for the station locations in Arcadia and Claremont. Segment 1 would include 2 LRT tracks throughout and 1 freight track between the Miller Brewing Company in Irwindale and the eastern boundary of Azusa. The freight track that now exists west of Miller Brewing, which serves a single customer in Monrovia, would be removed from service following relocation of that customer by the City of Monrovia. Segment 2 would include two LRT tracks throughout and 1 freight track between the eastern boundary of Azusa and Claremont. In Claremont, the single freight track joins up with the double Metrolink tracks (which are also used for freight movement) and continues through to Montclair (and beyond). This alternative also includes two railroad grade separations (in Azusa and in Pomona) so that LRT tracks would pass above the at-grade freight track. These allow the LRT and freight services to operate independently (thus eliminating the time-constrained double track option discussed in the Draft EIS/EIR). Implementation of the alternative would include relocation of the existing freight track within the rail right-of-way, but there would be no changes in the service provided to customers. The alternative includes 8 new traction power substations in Segment 2, as well as the 8 in Segment 1.

2. Build LRT to Azusa Alternative: This alternative (also referred to as Segment 1) would extend LRT service from the existing Sierra Madre Villa Station in Pasadena through the cities of Arcadia, Monrovia, Duarte, Irwindale, and to the eastern boundary of Azusa. (The main change from the Draft EIS/EIR is the inclusion of the City of Azusa.) The length of the alternative is approximately 11 miles. One station (and parking facility) would be located in each city, except for Azusa, which would have two. There are two options for the station location in Arcadia. Segment 1 would include two LRT tracks throughout and 1 freight track between the Miller Brewing Company in Irwindale and the eastern boundary of Azusa. The freight track that now exists west of Miller Brewing, which serves a single customer in Monrovia, would be removed from service following relocation of that customer by the City of Monrovia. This alternative also includes the railroad grade separation in Azusa so that LRT tracks would pass above the at-grade freight track. This allows the LRT and freight services to operate independently (thus eliminating the time-constrained double track option discussed in the Draft EIS/EIR). Implementation of the alternative would include relocation of the existing freight track within the rail right-of-way, but there would be no changes in the service provided

5-1 FINANCIAL ANALYSIS

The cost of a transportation investment falls into two categories: capital costs, and operating and maintenance (O&M) costs. Capital costs are the start-up costs for the project, including the costs of guideway construction, vehicles, and any system facilities necessary before the project can begin operation. Operating and maintenance costs are the costs associated with the regular running of a new transportation facility. Costs such as labor, vehicle maintenance, and overall facility maintenance all fall into this category.

This section discusses both types of costs, presents the proposed capital financing plan, and then analyzes the Los Angeles to Pasadena Metro Blue Line Construction Authority (Construction Authority) ability to afford the build alternatives.

5-1.1 Capital Cost Estimates for Build Alternatives

This section summarizes the capital cost estimates for the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative. The No Build Alternative does not have any associated capital costs for comparative purposes as they are considered in the overall financial capability of the Construction Authority along with the other alternatives under consideration. The capital cost methodology and capital cost estimates are based on the estimates and methodology prepared as part of the Advanced Conceptual Engineering activities conducted as part of the Final EIS/EIR technical activities. Detailed estimates prepared by Kal Krishnan Consulting Services and Parsons Brinckerhoff Quade & Douglas are available from the Construction Authority (Advanced Conceptual Engineering Cost Estimate, September 2005).

5-1.1.1 LRT Build Alternatives

The capital cost estimates were prepared with all costs expressed in 2005 dollars. Cost estimates are developed by identifying quantities on conceptual drawings and applying standardized rates as defined in the Construction Cost Methodology, the Advanced Conceptual Engineering Cost Estimate, the alternatives definitions, and the Engineering Plans and Drawings. The alignment plans, typical cross sections, and station concepts are included in Volume 4. In addition, capital costs for both additional buses (for the build alternatives) and LRT vehicles, as well as an estimate for the maintenance and operations facility, have been included.

The total capital cost includes allowances for an insurance program, master agreements with agencies, professional services, testing and pre-revenue service, environmental mitigation, and artwork. Additionally, contingency has been included for construction (such as guideway, systems, facilities, and stations) and right of way (ROW).

Table 5-1 presents the total capital costs (in millions of dollars) for the two Build Alternatives in 2005 dollars. The major differences between the build alternatives are the length of each alternative. The Full Build (Pasadena to Montclair) Alternative is 23.9 miles long and the Build LRT to Azusa Alternative is 11.4 miles. The Maintenance and Operations (M&O) Facility is only included in the Full Build (Pasadena to Montclair) Alternative.

TABLE 5-1
CAPITAL COST ESTIMATES (2005 $)

Cost Category	2005 Dollars in Millions		
	Full Build (Pasadena to Montclair) Alternative [1]	Build LRT to Azusa Alternative	LRT M&O Facility Total
Guideway	$133.0	$64.0	$0.0
Stations	$55.9	$22.7	$0.0
LRT M&O Facility/Bus Support Facilities	$59.9	$6.7	$57.3
Special Conditions	$216.1	$90.2	$0.0
Systems	$154.9	$72.2	$0.0
Subtotal – Construction	*$619.8*	*$255.8*	*$57.3*

Right-of-Way	$86.3	$32.9	$26.2
Vehicles	$38.6	$12.8	$0.0
Professional Services	$206.7	$88.3	$16.5
Unallocated Contingencies	$24.9	$12.5	$2.3
Total Cost	**$976.3**	**$402.3**	**$102.3**

Source: Kal Krishnan Consulting Services and Parsons Brinckerhoff, 2005.
(1) M&O facility cost is included.

5-1.2 Maintenance and Operations Facility

In Chapter 2 the proposed Maintenance and Operations Facility (M&O) is described. The capital cost estimate is presented in Table 5-1 and has a total estimated capital cost of approximately $102.3 million in 2005 dollars. The proposed M&O has been designed to handle the future needs of the total Gold Line from East Los Angeles to Montclair or approximately 44 miles of LRT operations.

5-1.3 Operating and Maintenance Cost Estimates

This section summarizes the Operating and Maintenance (O&M) cost estimate for the LRT Build Alternatives. The LRT O&M costs were determined using a resource cost build-up model based on the current LACMTA operating costs and the incremental bus costs for Foothill Transit and LACMTA services to be provided were based on the latest O&M costs for those agencies. The LRT cost model is described in the Operations and Maintenance Cost Estimates (September 2005) report prepared by the Construction Authority. The Gold Line Foothill Extension LRT proposed operating plan and the operating and maintenance cost estimates are estimated in 2005 dollars. The LRT O&M costs have assumed that the to build alternatives are extensions of an existing service (Gold Line Phase I) and takes advantage of the existing infrastructure and staffing structure already in place.

Table 5-2 presents the annual O&M costs for each alternative in 2005 dollars based on the proposed operations in year 2025. The table also shows the incremental O&M costs for each alternative compared to the No Build Alternative.

TABLE 5-2
OPERATING & MAINTENANCE COST ESTIMATES (2005 $)

Provider and Mode	2005 Dollars in Millions		
	No Build	Full Build (Pasadena to Montclair) Alternative	Build LRT to Azusa Alternative
LACMTA LRT Gold Line	$45.692	$61.820	$53.038
LACMTA Bus	$1,044.356	$1,044.831	$1,044.782
Foothill Transit Bus	$82.922	$88.032	$90.972
Total O&M Costs	$1,172.970	$1,194.683	$1,188.792
Increment to No Build	NA	$21.713	$15.822

Source: Construction Authority and Parsons Brinckerhoff, 2005.

5-1.4 Project Finance Plan

This section summarizes the capital and operating financial plans for the alternatives. The analysis focuses on the conceptual financial plans for the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative. A description is provided of the proposed revenue sources, commitment of these sources, and schedule of annual outlays planned.

Section 5-1.3.1 describes the proposed uses and sources of funding for the capital and O&M costs of the build alternatives. Section 5-1.3.2 presents the proposed flow of costs and revenues over the pre-2004 to 2030 period.

5-1.4.1 Proposed Uses and Sources of Funding

This section describes the proposed uses and sources of funding for the capital and O&M of the build alternatives. To provide a better understanding of the actual funds that would need to be expended and of the relative effects of inflation on costs and revenues, the financial analysis is presented in year-of-expenditure (YOE) dollars. YOE dollar values are computed by multiplying base year dollar values by the compounded escalation factor for the relevant year for the relevant cost factor. For example, in YOE dollars, $1.00 in 2005 is equivalent to $1.03 in 2006, using an inflation rate of 3.0 percent.

The escalation factors used to convert capital cost estimates in 2005 dollars to costs in YOE dollars costs were derived from forecasts of the Consumer Price Index (CPI) prepared in August 2004 by the UCLA Anderson School of Business Forecast Report for Los Angeles County. Over the 2005 – 2025 period, the annual CPI is projected to average approximately 2.65 percent, and range from a low of 2.33 percent in 2009 to a high of 3.03 percent in 2016. This is consistent with LACMTA's financial forecasting process.

a. Overview of Proposed Uses of Funds

Table 5-3 summarizes the capital costs of the two build alternatives in 2005 constant dollars and in YOE dollars. The costs summarized are comprised of the total capital costs, including allowances for professional services and project contingencies and prior State/local expenditures on right of way and on the Metro Gold Line Phase I (Los Angeles to Sierra Madre Villa). As shown in the table, excluding prior expenditures, over the pre-2004 to 2025 period, the capital cost of the Full Build (Pasadena to Montclair) Alternative is $976.3 million in 2005 dollars and $1,120.1 million in YOE dollars. The capital cost of the Build LRT to Azusa Alternative is $402.3 million in 2005 dollars and $436.0 million in YOE dollars. Including prior State/local expenditures on right-of-way and the Metro Gold Line Phase I, the total project capital costs in YOE dollars are $1,948.1 million and $794.0 million for the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative respectively. These are total project costs that include both the LA County and San Bernardino shares.

TABLE 5-3
CAPITAL COST OF THE BUILD LRT ALTERNATIVES
IN 2005 DOLLARS AND IN YEAR OF EXPENDITURE DOLLARS, MILLIONS

Cost Category	Full Build (Pasadena to Montclair) Alternative		Build LRT to Azusa Alternative	
	2005 Dollars in Millions	YOE Dollars in Millions	2005 Dollars in Millions	YOE Dollars in Millions
Guideway and Track Elements	$133.0	$152.1	$64.0	$69.4
Stations	$55.9	$65.1	$22.7	$24.9
Support Facilities	$59.9	$72.8	$6.7	$7.9
Sitework and Special Conditions	$216.0	$248.6	$90.2	$97.8
Systems	$154.9	$177.4	$72.2	$78.3
Right-of-Way, Land, Existing Improvements	$86.3	$95.8	$32.9	$34.2
Vehicles	$38.6	$46.6	$12.8	$15.2
Professional Services	$206.8	$232.9	$88.3	$94.6
Unallocated Contingency	$24.9	$28.7	$12.5	$13.7
Total Capital Cost	**$976.3**	**$1,120.1**	**$402.3**	**$436.0**
Interest Cost	$0.0	$0.0	$0	$0
Prior State/Local Expenditure for Right-of-Way (Ph I and II)	$97.1	$97.1	$73.0	$73.0
Prior State/Local Expenditure for Phase I Metro Gold Line to SMV	$731.0	$731.0	$285.0 (part only)	$285.0 (part only)
Total Prior Local/State Expenditure	**$828.1**	**$828.1**	**$358.0**	**$358.0**
TOTAL PROJECT COST	**$1,804.4**	**$1,948.1**	**$760.3**	**$794.03**

Source: Parsons Brinckerhoff, 2005.

Table 5-4 summarizes the proposed uses and sources of funds for the capital and operations and maintenance of the build alternatives over the pre-2004 – 2025 period. For the Full Build (Pasadena to Montclair) Alternative, the total cost for capital, prior State/local expenditures, and O&M is $2,372.5 million (YOE $). Of this total, $1,120.1 million is for capital, $828.1 is for prior State/local expenditures, and $424.4 million is for O&M over the initial 16 years of operation. Included in the prior State/local expenditures are $97.1 million for the acquisition of the railroad ROW to Montclair and $731.0 million for the Metro Gold Line Phase I.

TABLE 5-4
PROPOSED SOURCES AND USES OF FUNDING
FISCAL YEAR PRE-2004 - 2025
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

	Full Build (Pasadena to Montclair) Alternative	Build LRT to Azusa Alternative
USES OF FUNDS		
LA County Costs		
Project Capital Costs	$1,069.8	$436.0
Interest Cost	$0.0	$0.0
Total Project Capital Cost	**$1,069.8**	**$436.0**
Prior Expenditure for Right-of-Way	*$96.0*	*$73.0*
Phase I Metro Gold Line (LA to Sierra Madre Villa)	*$731.0*	*$285.0*
Subtotal, LA County Capital Costs	***$1,896.8***	***$794.0***
SB County Costs		
Project Capital Costs	$50.2	$0.0
Interest Cost	$0.0	$0.0
Total Project Capital Cost	**$50.3**	**$0.0**
Prior Expenditure for Right-of-Way	$1.1	
Subtotal, SB County Capital Costs	***$51.3***	***$0.0***
TOTAL CAPITAL COSTS	***$1,948.1***	***$794.0***
SOURCES OF CAPITAL FUNDS		
LA County Capital Funding Sources		
Federal		
FTA Section 5309 New Starts	$948.4	$397.0
FTA Section 5309 Bus and Bus Related Intermodal	$12.5	$12.5
FHWA TCSP	$2.9	$1.5
State		
State Funds (Proposition 192 Seismic Bond)	$13.9	$13.9
Regional/Local		
Carryover from Phase I	$4.0	$4.0
Southern California Association of Governments	$1.0	$0.5
Interest	$2.0	$1.6
Corridor Cities Contribution	$11.0	$5.0
State/Regional/Local Sources	$74.1	$0.0
Subtotal, LA County Capital Sources	***$1,069.8***	***$436.0***
Prior State/Local Expenditure for Right of Way	*$96.0*	*$73.0*
Phase I Metro Gold Line (LA to Sierra Madre Villa)	*$731.0*	*$285.0*
Total, LA County Capital Sources and Prior State/Local Expenditures	***$1,896.8***	***$794.0***
SB County Capital Funding Sources		
Federal		
FTA Section 5309 New Starts	$25.6	$0.0
Local		
SANBAG Local	$24.6	$0.0
Subtotal, SB County Capital Sources	***$50.2***	***$0.0***
Prior State/Local Expenditure for Right of Way	*$1.1*	*$0.0*
Total, SB County Capital Sources and Prior	***$51.3***	***$0.0***

TABLE 5-4
PROPOSED SOURCES AND USES OF FUNDING
FISCAL YEAR PRE-2004 - 2025
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

	Full Build (Pasadena to Montclair) Alternative	Build LRT to Azusa Alternative
State/Local Expenditures		
TOTAL CAPITAL FUNDING SOURCES	***$1,948.1***	***$794.0***
O&M COSTS AND REVENUES		
O&M COSTS		
LRT	$303.0	$159.7
MTA Bus	$10.4	$9.3
Foothill Transit	$111.0	$174.8
Total O&M Costs	***$424.4***	***$343.8***
SOURCES OF O&M FUNDS		
LRT Farebox Revenues	$63.1	$32.9
Bus Farebox Revenues	$32.4	$49.1
MTA Local Funds	$328.9	$261.8
TOAL O&M Sources	***$424.4***	***$343.8***

Notes:

1. The prior State/local expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars. However, the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA. The ROW costs shown for the Full Build and Build LRT to Azusa alternatives reflect costs from downtown Los Angeles to Montclair and Azusa respectively.
2. The prior State/local expenditure on the Metro Gold Line Phase I reflects the total actual cost for the Full Build Alternative and a share of the total for the Build LRT to Azusa Alternative.
3. Capital costs for the Full Build Alternative include 10 rail cars, 11 buses, and a new maintenance facility.
4. Capital costs for the Build LRT to Azusa Alternative include 28 buses.
5. San Bernardino Associated Governments (SANBAG) has committed up to $35.0 million in local funds.

Source: Sharon Greene & Associates, 2005.

For the Build LRT to Azusa Alternative, the total cost for capital, prior State/local expenditure for ROW and the Gold Line Phase I, and O&M is $1,137.9 million (YOE $). Of this total, $436.0 million is for capital, $358.0 for prior State/local expenditure, and $343.9 million is for O&M over the initial 16 year period of operations. Included in the prior State/local expenditures are $73.0 million for the acquisition of the railroad ROW to Azusa and a $278.6 million share of the total cost for the Metro Gold Line Phase I.

The capital costs would be shared by two county level jurisdictions, each with a separate funding plan. For this reason, the cash flows distinguish between the costs and revenues for each county. The Los Angeles County share is 97.4 percent of the capital costs and prior State/local expenditure for the Full Build (Pasadena to Montclair) Alternative and 100.0 percent of the capital costs and prior State/local expenditure for the Build LRT to Azusa Alternative. Of the $1,948.1 million in capital cost and prior expenditure for the Full Build (Pasadena to Montclair) Alternative, $1,896.8 million is the Los Angeles County share and $51.3 million is the San Bernardino County share. Of the $794.0 million in capital cost and prior expenditure for the Build LRT to Azusa Alternative, all costs are for Los Angeles County.

Table 5-4 also summarizes the incremental O&M costs of the Build alternatives over the No Build Alternative over the 2010 – 2025 period in which the LRT project would be in operation. Of the $424.4 million in O&M costs for the Full Build (Pasadena to Montclair) Alternative, $303.0 million (71.3 percent) are for LRT service, $10.4 million (2.5 percent) is for bus service provided by MTA, and $111.0 million (26.2 percent) are for bus service provided by Foothill Transit. Of the $343.9 million in O&M costs for the Build LRT to Azusa Alternative, $159.7 million (46.4 percent) are for LRT service, $9.4 (2.8 percent) million for bus service provided by MTA, and $174.8 million (50.8 percent) are for bus service provided by Foothill Transit.

b. Overview of Proposed Sources of Funds

This section focuses on the proposed sources of funding for the Build Alternatives over the pre-2004 – 2025 period. Capital funding sources are described first, followed by a description of O&M funding sources.

Capital Funding Sources

Table 5-5 and **Figure 5-1** illustrate the variety of revenue sources proposed to fund the capital costs of the Build alternatives. These sources consist of:

Federal Sources:

- FTA Section 5309 New Starts
- FTA Section 5309 Bus and Bus Related Intermodal
- FHWA Transportation and Community and Systems Preservation Program (TCSP)

State Sources:

- State Funds (Proposition 192 Seismic Bond)

Regional/Local Sources:

- Carryover from Phase I
- Southern California Association of Governments
- Interest
- Corridor Cities Contributions
- State/Regional/Local Sources

Prior State/Local Expenditures for Right-of-Way

Prior State/Local Expenditures for the Metro Gold Line Phase I (Los Angeles to Sierra Madre Villa)

TABLE 5-5
PROPOSED CAPITAL REVENUE SOURCES
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

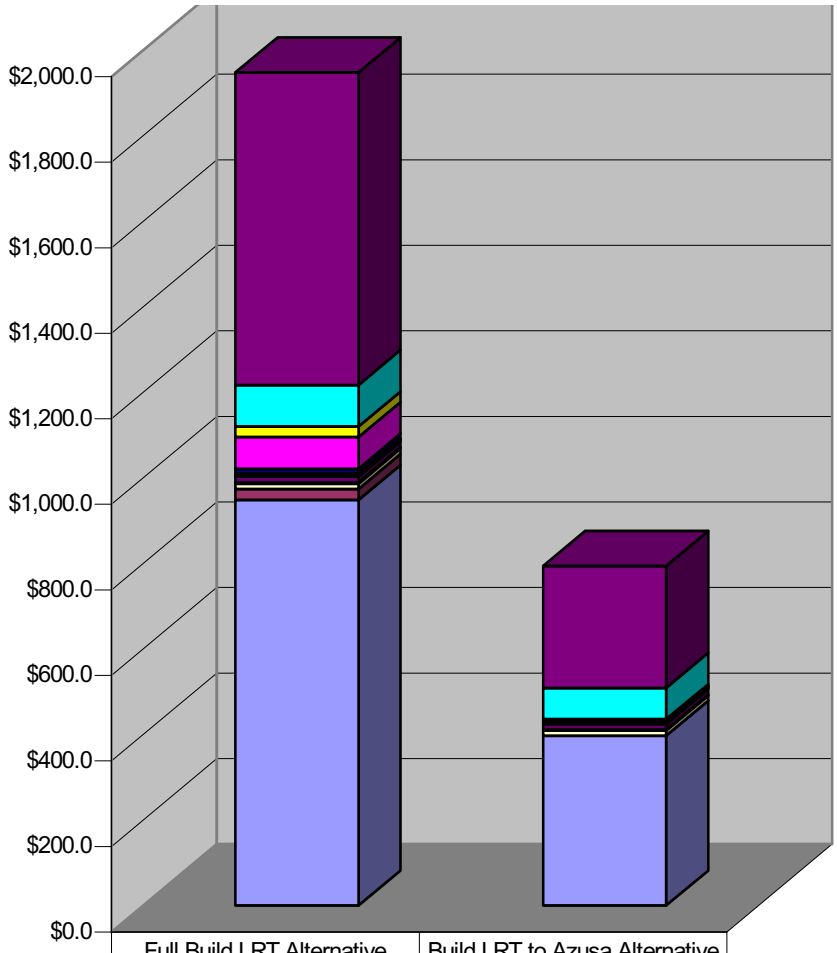
	FULL BUILD (PASADENA TO MONTCLAIR) ALTERNATIVE		BUILD LRT TO AZUSA ALTERNATIVE	
	YOE Dollars, Millions	Percent of Total	YOE Dollars, Millions	Percent of Total
LOS ANGELES COUNTY				
CAPITAL COSTS				
Project Capital Cost	$1,069.8	56.4%	$436.0	54.9%
Interest Cost	$0.0	0.0%	$0.0	0.0%
Total Project Capital Cost	**$1,069.8**	**56.4%**	**$436.0**	**54.9%**
Prior State/Local Expenditure for Right of Way	*$96.0*	*5.1%*	*$73.0*	*9.2%*
Phase I Metro Gold Line (Los Angeles to Sierra Madre Villa)	*$731.0*	*38.5%*	*$285.0*	*35.9%*
TOTAL CAPITAL COSTS AND PRIOR STATE/LOCAL EXPENDITURES	***$1,896.8***	***100.0%***	***$794.0***	**100.0%**
CAPITAL REVENUE SOURCES				
Federal				
FTA Section 5309 New Starts	$948.4	50.0%	$397.0	50.0%
FTA Section 5309 Bus and Bus Related Intermodal	$12.5	0.7%	$12.5	1.6%
FHWA TCSP	$2.9	0.2%	$1.5	0.2%
State				
Proposition 192 Seismic Bond	$13.9	0.7%	$13.9	1.8%
Regional/Local				
Carryover from Phase I	$4.0	0.2%	$4.0	0.5%
Southern California Association of Governments	$1.0	0.1%	$0.5	0.1%
Interest	$2.0	0.1%	$1.6	0.2%
Corridor Cities Contribution	$11.0	0.6%	$5.0	0.6%
State/Regional/Local Sources	$74.1	3.9%	$0.0	0.0%
Subtotal, LA County Capital Revenue Sources	**$1,069.8**	**56.4%**	***$436.0***	**54.9%**
Prior State/Local Expenditure on Right of Way	*$96.0*	*5.1%*	*$73.0*	*9.2%*
Phase I Metro Gold Line (Los Angeles to Sierra Madre Villa)	*$731.0*	*38.5%*	*$285.0*	*35.9%*
TOTAL CAPITAL REVENUE SOURCES, LA COUNTY	**$1,896.8**	**100.0%**	***$794.0***	**100.0%**

TABLE 5-5
PROPOSED CAPITAL REVENUE SOURCES
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

	FULL BUILD (PASADENA TO MONTCLAIR) ALTERNATIVE		BUILD LRT TO AZUSA ALTERNATIVE	
	YOE Dollars, Millions	Percent of Total	YOE Dollars, Millions	Percent of Total
SAN BERNARDINO COUNTY				
CAPITAL COSTS				
Project Capital Cost	$50.2	98.0%	$0.0	0.0%
Interest Cost	$0.0	0.0%	$0.0	0.0%
Total Project Capital Cost	$50.2	98.0%	$0.0	0.0%
Prior State/Local Expenditure for Right of Way	*$1.1*	*2.0%*	*$0.0*	0.0%
TOTAL CAPITAL COSTS AND PRIOR STATE/LOCAL EXPENDITURES	**$51.3**	**100.0%**	**$0.0**	**0.0%**
CAPITAL REVENUE SOURCES				
Federal				
FTA Section 5309 New Starts	$25.6	50.0%	$0.0	0.0%
Local				
SANBAG Local *	$24.6	48.0%	$0.0	0.0%
Subtotal, SB County Capital Revenue Sources	**$50.2**		$0.0	0.0%
Prior State/Local Expenditure on Right of Way	*$1.1*	*2.0%*	*$0.0*	0.0%
TOTAL CAPITAL REVENUE SOURCES, SB COUNTY	**$51.3**	**100.0%**	**$0.0**	**0.0%**

* San Bernardino Associated Governments (SANBAG) has committed up to $35.0 million in local funds.

Source: Sharon Greene & Associates, 2005.



	Full Build LRT Alternative	Build LRT to Azusa Alternative
Phase I - Metro Gold Line (Los Angeles to Sierra Madre)	$731.0	$284.9
Prior Local/State Expenditure for Ph II Right of Way	$97.1	$73.0
Countywide Sales Tax (San Bernardino)	$24.6	$0.0
State/Regional/Local Sources	$74.1	$0.0
Corridor Cities Contribution	$11.0	$5.0
Interest	$2.0	$1.6
Southern California Association of Governments	$1.0	$0.5
Carryover from Phase I	$4.0	$4.0
State Funds (Proposition 192 Seismic Bond)	$13.9	$13.9
FHWA TCSP	$2.9	$1.5
5309 Bus and Bus Related Intermodal	$12.5	$12.5
5309 New Starts (San Bernardino County)	$25.6	$0.0

FIGURE 5-1: SUMMARY OF PROPOSED CAPITAL RESOURCES (IN MILLIONS OF YEAR-OF-EXPENDITURE DOLLARS)

Of the sources proposed for the LA County share, federal sources comprise 50.9 percent of the capital revenues proposed for the Full Build (Pasadena to Montclair) Alternative and 51.8 percent of the revenues for the Build LRT to Azusa Alternative. The predominant federal source is FTA Section 5309 New Starts funding, which comprises 50.0 percent of the capital revenues for each alternative. State sources contribute between 1 and 2 percent of total revenues. Regional/Local sources comprise 4.8 percent and 1.4 percent. Prior State/Local expenditures comprise the remaining 43.6 percent and 45.1 percent of the funding for the two Build alternatives respectively.

Of the sources proposed for the San Bernardino County share, federal sources comprise 50.0 percent of the capital revenues for the Full LRT Build (Pasadena to Montclair) Alternative. All federal funding for the San Bernardino share is proposed to be derived from FTA New Starts funds. Of the 50.0 percent balance, 48.0 percent is proposed to be provided from local sources, with 2.0 percent from prior State/Local expenditures for Right of Way. While local funding of $24.6 million is proposed in the financial plan, SANBAG has committed up to $35.0 million in local funding for the Full Build (Pasadena to Montclair) Alternative.

Each of the proposed capital funding sources is described briefly in the sections following.

❑ Federal Sources for Capital

Federal sources proposed for capital consist of FTA Section 5309 New Start funds, FTA Section 5309 Bus and Bus Related Intermodal funds, and FHWA Transportation and Community and Systems Preservation Program (TCSP).

FTA Section 5309 New Start Funds

Under this program, FTA provides federal discretionary funding for proposed fixed guideway New Starts and extensions. New Starts funds represent 50.0 percent of the funding for both Build alternatives, or $974.1 million and $397.0 million for the alternatives respectively. The Construction Authority will coordinate with San Bernardino Associated Governments in securing New Starts funding for the Gold Line Foothill Extension.

For the portion of the alternatives allocated to LA County, this source is proposed to provide 50.0 percent of the capital funding. The total level of FTA New Starts proposed for the LA County share is $948.4 million for the Full Build (Pasadena to Montclair) Alternative and $390.6 for the Build LRT to Azusa Alternative. Of these totals, $4.0 million and $0.5 million in FTA New Starts funding was authorized in the 2004 and 2005 Federal Budget respectively. An additional $25.6 million in FTA New Starts funding is proposed for the San Bernardino County share of the Full Build Alternative, representing 50.0 percent of the capital funding for the San Bernardino County portions of this alternative. The Section 5309 shares for these build alternatives, total and by county, are within the 50% maximum share objective for New Starts Program contributions.

Table 5-6 summarizes the annual schedule of projected for drawdown of FTA Section 5309 funds through 2014 for the Full Build Alternative and through 2013 for the Build LRT to Azusa Alternative.

TABLE 5-6
ANNUAL DRAWDOWN LEVELS OF NEW STARTS FUNDING
PROPOSED OVER THE PRE-2004 - 2014 PERIOD
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

Fiscal Year	FULL BUILD (PASADENA TO MONTCLAIR) ALTERNATIVE		BUILD LRT TO AZUSA ALTERNATIVE	
	LOS ANGELES COUNTY	SAN BERNARDINO COUNTY	LOS ANGELES COUNTY	SAN BERNARDINO COUNTY
2005	$ 0.9	$ 0.0	$ 0.9	
2006	$ 18.3	$ 0.3	$ 18.3	
2007	$108.3	$ 0.0	$108.3	
2008	$102.9	$ 0.0	$102.9	
2009	$ 99.8	$ 0.0	$ 99.8	
2010	$ 61.3	$ 1.3	$ 39.6	
2011	$157.0	$ 7.1	$ 10.3	
2012	$176.0	$ 7.3	$ 10.6	
2013	$163.6	$ 6.8	$ 6.3	
2014	$ 60.4	$ 2.8	$ 0.0	
Total	**$948.4**	**$25.6**	**$397.0**	**$0.0**

Note: Revenues not rounded.
Source: Sharon Greene & Associates, 2005.

FTA Section 5309 Bus and Bus Related Intermodal Funds

Under this program, FTA provides federal discretionary funding for bus and bus related capital projects, including construction or rehabilitation of facilities and acquisition of vehicles. FTA Section 5309 Bus funds are proposed to fund intermodal transfer facilities, transportation centers, shelters, and related uses along the Gold Line Foothill Extension. A total of $12.5 million in FTA Section 5309 Bus funding is authorized for the Gold Line Foothill Extension in SAFETEA-LU.

FHWA TCSP Funds

The Metro Gold Line Construction Authority was awarded $2.9 million in funding through the Transportation and Community and Systems Preservation Program. These funds have been authorized to San Gabriel Valley Council of Governments as the local transportation funding organization and the COG has agreed to assign these funds to the project in their capital program.

❑ State Sources for Capital

The Metro Gold Line Construction Authority received State funds through the Proposition 192 Seismic Retrofit and Replacement Bond program. These funds are being expended on the Extension beginning in 2003. A total of $13.9 million in such funding is proposed in both LRT build alternatives.

❑ Regional/Local Sources for Capital

Regional/Local sources are projected to provide $92.1 million and $11.1 million for the LA portions of the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative, respectively, representing 4.9 percent and 1.4 percent of proposed capital revenues. Within San Bernardino County, of the $35.0 million in local funding committed by SANBAG, $24.6 million is proposed to fund 48.0 percent of the San Bernardino County portion of the Full Build Alternative.

The sources of Regional/Local funding proposed for LA County consist of carryover funds from Phase I, SCAG, interest earnings, Corridor cities contributions, and a combination of State/Regional/Local sources. Local funding for the San Bernardino County share would be provided through the extension of the Measure I county sales tax program approved by county voters in November 2004.

Carryover Funds from Phase I

The Authority has approved the use of $4.0 million in carryover funds from Phase I for the Metro Gold Line Foothill Extension.

Southern California Association of Governments

The Authority has received $1.0 million from the Southern California Association of Governments for use on the Metro Gold Line Foothill Extension. Of this total, $0.5 million is for the Build LRT to Azusa Alternative, with the full $1.0 million available for the Full Build Alternative.

Interest Earnings

The Authority has programmed a total of $2.0 million in interest earnings for use on the Metro Gold Line Foothill Extension. Of this total, $1.6 million is available for use on the Build LRT to Azusa Alternative, with the full $2.0 million available for the Full Build Alternative.

Corridor Cities Contribution

The local jurisdictions along the Gold Line Foothill Extension corridor have indicated their commitment to assist in funding the capital cost of the project. Each city is proposed to contribute $1 million. With 11 cities along the Full Build Alternative and five along the Build LRT to Azusa, a total of $11.0 million and $5.0 million is proposed for the two alternatives respectively.

Local jurisdictions could potentially use a variety of funding sources for their contributions or in-kind services. Among possible funding sources are Proposition A 25 Percent Local Return sales tax funds, Proposition C 20 Percent Local Return sales tax funds, local gas tax subventions, tax increment financing revenues from redevelopment, and joint development revenue sources.

State/Regional/Local Sources

A combination of State/Regional/Local sources are proposed to provide $74.1 million in funding for the Full Build Alternative in Los Angeles County. These sources could include funds secured directly from the State, State Highway Account funds programmed by Caltrans and by the MTA, Proposition A and C sales tax funds, and Transportation Development Act funds. Currently, the MTA relies on three existing sales tax-based revenue sources: Proposition A, Proposition C, and Transportation Development Act

(TDA). Propositions A and C are each projected to generate $592.1 million in 2005, with TDA forecasted to generate $302.3 million in 2005. The MTA receives, programs, and allocates these funds and audits their usage. In addition, enabling legislation was passed in 2003 authorizing the MTA to place an interim sales tax on the ballot. As described below, portions of these sources could be used to fund the LA County share of the Gold Line Foothill Extension. San Bernardino County Measure I sales tax funds are proposed for use in funding the San Bernardino County share of the alternatives.

Proposition A is a half-cent sales tax for public transit approved by Los Angeles County voters in 1980. Of the revenues generated annually, 25 percent are distributed back to the cities and county of LA on a per capita basis; 35 percent are used for rail development in LA County as specified on the Proposition A Rail Corridor Map and for rail operations; and 40 percent are set-aside by MTA for discretionary programs related to bus capital and operations. As a designated Proposition A Corridor, the Gold Line Extension is eligible to receive Proposition A rail development funds.

Proposition C is a half-cent sales tax for public transportation purposes approved by the voters in 1990. Of the revenues generated, 5 percent is for rail and bus security; 10 percent is for commuter rail and transit centers; 25 percent is for transit-related improvements to streets and highways; 20 percent is for local return for transit use; and 40 percent is for discretionary programs to improve and expand rail and bus transit services. The MTA Reform and Accountability Act was approved by the voters in 1998 permitting the expenditure of Proposition C funds for transit improvements to rail rights of way.

TDA authorizes the use of ¼ of 1 percent of the state sales tax for transportation purposes. The MTA allocates TDA funds to municipal transit operators based on established criteria and formulas. Before allocation, 1 percent of TDA funds are set-aside for MTA administrative costs and ¾ percent for transportation planning and programming by Southern California Association of Governments. Of the remaining funds, up to 2 percent are for bicycle and pedestrian facilities; up to 93 percent are allocated to municipal operators for transit capital and operations; and up to 4.8 percent are for transit and paratransit services provided under contract.

County sales tax funds are also proposed for use in San Bernardino County. Initially approved by county voters in 1989, San Bernardino County's Measure I is a half-cent sales tax authorized for a 20-year period to fund a defined multimodal transportation expenditure program including the Gold Line Foothill Extension. The extension of the Measure I program was approved by county voters in November 2004.

❑ Prior State/Local Expenditure for Right-of-Way

In 1992, the MTA and SANBAG purchased the Pasadena Subdivision railroad right-of-way within their jurisdictions. The acquisition was 100 percent funded with MTA Proposition A sales tax funds, SANBAG Measure I sales tax funds, and State Proposition 116 Rail Bonds funds, with no federal funding used.

The proposed capital financial plan calls for this prior expenditure of funds to be credited as part of the non-federal match for the Gold Line Foothill Extension project. Extending from downtown Los Angeles to Montclair, the total cost expended for the right-of-way for the Full Build Alternative was $97.1 million (1992 dollars). Of this total, $96.0 million was in Los Angeles County and $1.1 million in San Bernardino County. For the Build LRT to Azusa Alternative, a total of $73.0 million was expended in Los Angeles County for the right-of-way from downtown Los Angeles to Azusa.

The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

❑ Prior State/Local Expenditure for Phase I Metro Gold Line

A total of $731.0 million in State and local funding was expended for Phase I of the Metro Gold Line from downtown Los Angeles to Sierra Madre Villa, with no federal funds expended. This prior expenditure of State/Local funds is also proposed to be credited as part of the non-federal match for the Gold Line Foothill Extension project. For the Full Build Alternative, the entire $731.0 million is proposed as match. For the Build LRT to Azusa Alternative, $285.0 million of the total prior State/Local expenditure is proposed as match.

Revenue Sources for Operations and Maintenance

Table 5-7 summarizes the costs and the revenue sources proposed to fund the incremental O&M costs associated with the build alternatives. As shown in the table, a total of $424.4 million and $343.9 million in incremental O&M costs are projected over the FY 2010-2025 period for the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative, respectively. These costs consist of three components: LRT and incremental MTA and Foothill Transit bus service.

Approximately 71.4 percent of the incremental O&M costs of the Full Build (Pasadena to Montclair) Alternative are attributable to the extension of the Gold Line LRT service, with 2.5 percent and 26.2 percent attributable to additional MTA and Foothill Transit bus service respectively. With its reduced miles of LRT service and greater reliance on MTA and Foothill Transit buses, the Build LRT to Azusa Alternative has O&M costs that are divided between LRT (46.4 percent) and MTA and Foothill Transit bus services (2.7 percent and 50.8 percent respectively).

TABLE 5-7
PROPOSED OPERATIONS AND MAINTENANCE
FUNDING FISCAL YEARS 2010 - 2025
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

	Full Build (Pasadena to Montclair) Alternative		Build LRT to Azusa Alternative	
	Cost	**Percent**	**Cost**	**Percent**
O&M COSTS & REVENUES				
O&M COSTS				
LRT	$303.0	71.4%	$159.7	46.4%
MTA Bus	$10.4	2.5%	$9.3	2.7%
Foothill Transit	$111.0	26.2%	$174.8	50.8%
Total O&M Costs	***$424.4***	***100.0%***	***$343.8***	***100.0%***
SOURCES OF O&M FUNDS				
LRT Farebox Revenues	$63.0	14.9%	$32.9	9.6%
Bus Farebox Revenue	$32.4	7.6%	$49.1	14.3%
MTA Local Funds	$328.9	77.5%	$261.8	76.1%
Total O&M Sources	***$424.4***	***100.0%***	***$343.8***	***100.0%***

Source: Sharon Greene & Associates, 2005.

Incremental O&M costs are projected to grow annually over the 2010-2025 period. **Table 5-8** summarizes the increases in O&M costs at key intervals in 2005 dollars and in YOE dollars. In constant 2005 dollars, the total annual O&M costs of the Full Build (Pasadena to Montclair) Alternative are

projected to be $6.5 million in 2010, increase to $21.7 million per year in 2015, and remain at this level through 2025. In constant 2005 dollars, the total annual O&M costs of the Build LRT to Azusa Alternative are projected to be $7.9 million in 2010, increase to $15.8 million per year in 2015, and remain at this level through 2025. With respect to LRT service, in 2005 constant dollars, the operating cost for LRT service is projected to be $3.7 million in 2010, increase to $16.1 million per year in 2015 and remain at this level through 2025 for the Full Build (Pasadena to Montclair) Alternative. In 2005 constant dollars, the LRT operating costs for the Build LRT to Azusa Alternative are projected to be $3.7 million in 2010, increase to $7.4 million per year in 2015 and remain at this level through 2025.

Funding for the O&M costs of the Build Alternatives is proposed to be derived from three sources. These sources are Gold Line Foothill Extension LRT fare revenues, MTA and Foothill Transit bus fare revenues, and MTA Operating Support.

Fare Revenues

Fares comprise an average of 30.1percent for MTA operations, 26.6 for municipal operators including Foothill Transit and 21.3 percent for MTA rail operations revenues for the Gold Line Phase I under the "Long Range Transportation Plan Financial Forecasting Model, August 5, 2004", based on current fare revenue assumptions. Fare recovery is assumed to adjust to reflect changes in fare media types. Fare recovery adjustments are based on the CPI rate, opening of new projects and transit corridors, and fare media projections (cash, monthly pass usage increase or decrease, and universal fare card).

TABLE 5-8
INCREMENTAL OPERATIONS AND MAINTENANCE COSTS OVER NO BUILD
IN FY 2010, FY 2015, FY 2025
(IN YEAR OF EXPENDITURE DOLLARS, MILLIONS)

Fiscal Year	Full Build (Pasadena to Montclair) Alternative		Build LRT to Azusa Alternative	
	2005 $	Year of Expenditure $	2005 $	Year of Expenditure $
FY 2010				
LRT	$3.7	$4.2	$3.7	$4.2
MTA Bus	$0.2	$0.3	$0.2	$0.2
Foothill Transit	$2.6	$2.9	$4.0	$4.6
Total	***$6.5***	***$7.3***	***$7.9***	***$9.0***
FY 2015				
LRT	$16.1	$20.9	$7.4	$9.5
MTA Bus	$0.5	$0.6	$0.4	$0.6
Foothill Transit	$5.1	$5.3	$8.1	$10.4
Total	***$21.7***	***$28.1***	***$15.9***	***$20.5***
FY 2025				
LRT	$16.1	$30.8	$7.4	$14.0
MTA Bus	$0.5	$0.9	$0.4	$0.8
Foothill Transit	$5.1	$9.7	$8.1	$15.4
Total	***$21.7***	***$41.4***	***$15.9***	***$30.2***

Source: Sharon Greene & Associates, 2005

Over the 2010-2025 period, for the Full Build (Pasadena to Montclair) Alternative, LRT fare revenues are projected to fund a total of $63.1 million, or fund 14.9 percent of total O&M costs. Bus fare revenues are projected to total $32.4 million, and fund 7.6 percent of total O&M costs. The 77.5 percent balance or $328.9 million is proposed to be derived from MTA local funds.

With respect to the Build LRT to Azusa Alternative, LRT fare revenues are projected to fund a total of $32.9 million, or 9.6 percent of total O&M costs. Bus fare revenues are projected to total $49.2 million, and fund 14.3 percent of total O&M costs. The 76.1 percent balance or $261.8 million is proposed to be derived from MTA local funds.

MTA Operating Support

In July 2005, the MTA Board voted to approve MTA's operation of the Gold Line Foothill Extension. Over the 2010-2025 period, MTA operating support is proposed to fund a total of $328.9 million (77.5 percent) and $261.8 million (76.1 percent)of total O&M costs for the Full Build (Pasadena to Montclair) and Build LRT to Azusa Alternatives respectively. This level of operating support would be funded as part of the funding MTA currently provides for operation of public transportation services, totaling over $50.0 billion. MTA operations and maintenance support is provided from a variety of revenue sources. Key sources of operating funds are described below.

Reliance on Sales Tax Based Revenues

The MTA relies on the three sales tax-based revenue sources described earlier: Proposition A, Proposition C, and Transportation Development Act (TDA). Propositions A and C sales tax revenues account for 33.5% of the total MTA bus operations and 67.3% of MTA rail operations over the financial plan period. Based on the MTA Long Range Financial Model updated in August 2004, the specific uses of the sales tax based revenues are as follows:

Proposition A Half-Cent Sales Tax. MTA rail operations are funded in part by the Proposition A 35% rail program. MTA bus operations are funded in part by the Proposition A 40% discretionary program. Approximately 68.0% of the available Proposition A revenues fund MTA bus and rail operations through the financial forecasting model period of 2025, with 54.4 percent for bus operations and 13.6% for rail operations.

Proposition C Half-Cent Sales Tax. The Proposition C 40% Discretionary program funds a portion of the MTA bus and rail operations along with the Proposition C 5% security funds. These Proposition C funds contribute approximately 12.4% of the total MTA bus operations funding and approximately 25,8% of rail operations funding through 2025.

Transportation Development Act. A statewide quarter-percent sales tax is provided to counties for transportation purposes under the Transportation Development Act (TDA). Under Article 4 of the Act, funds can be used for transit operations or capital purposes. Currently, approximately $200.0 million is generated annually for Article 4 purposes. TDA funds about 21.8% of MTA bus operations.

FTA Section 5307

Under TEA-21 and SAFETEA-LU, FTA grant recipients may use Section 5307 formula funds to pay for preventive maintenance costs. MTA is using these flexible funds for eligible bus and rail preventive maintenance costs in the operating budget. Approximately 8.8% of the MTA bus operations costs are funded with this source through 2025.

Other Revenues

MTA has historically pursued one-time revenues from a variety of sources, such as the sale of surplus assets, lapsed funds from other programs, and fund balance transfers, as well as federal funds through the Congestion Mitigation and Air Quality (CMAQ) program. Specific one-time revenues, such as anticipated lease-leaseback arrangements and the liquidation of reserve funds that are no longer required, are also used for O&M.

5-1.4.2 Proposed Flow of Costs and Revenues from Pre-2004 - 2025

Pro forma, year-by-year cash flow analyses were conducted to assess the overall adequacy of revenues to cover the proposed capital and operations and maintenance costs associated with the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative. **Table 5-9** and **Table 5-10** contain the cash flow analyses of the two alternatives respectively.

The cash flow models used in the financial assessment define the magnitude, timing, and type of expenditure for which revenues may be required. The cash flow models consist of four basic components: Operating Costs, Capital Costs, Operating Revenues, and Capital Revenues, each of which has sub-components. With respect to the capital and operating revenues, consideration was given to the types of costs eligible to receive particular sources of funding as well as potential legal restrictions and/or matching requirements associated with each revenue source.

Figures 5-2 through 5-4 illustrate the flow of costs proposed over the pre-2004 to 2025 period. Figures 5-2 and 5-3 indicate the annual cost expenditures by category for the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative, respectively. As shown in the figures, peak expenditures are proposed to occur in 2011-2013 for the Full Build (Pasadena to Montclair) Alternative and in 2007-2009 for the Build LRT to Azusa Alternative.

Figure 5-4 illustrates the annual build-up of O&M costs over the period. As shown in the figure, over the 2009–2014 period, O&M costs are greater for the Build LRT to Azusa Alternative due to the more more extensive bus service associated with this alternative. Beginning in 204, with the extension of LRT revenue service to Montclair, annual O&M costs are greater for the Full Build Alternative.

TABLE 5-9

FULL BUILD LRT ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA; APRIL 2014 TO MONTCLAIR (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES	TOTAL	FY 2004 and before	FY 2005	FY 2006	FY 2007	FY 2008
CAPITAL COSTS & REVENUES						
Capital Costs						
10 Guideway and Track Elements	$144,137.7	$0.0	$0.0	$0.0	$20,212.5	$20,715.8
20 Stations	$62,404.6	$0.0	$0.0	$0.0	$0.0	$11,020.7
30 Support Facilities *	$72,848.2	$0.0	$0.0	$0.0	$0.0	$0.0
40 Sitework & Special Conditions	$231,871.6	$0.0	$0.0	$0.0	$28,487.6	$29,198.0
50 Systems	$168,870.3	$0.0	$0.0	$0.0	$23,614.1	$23,382.2
60 ROW, Land, Existing Improvements	$95,517.4	$0.0	$0.0	$15,396.0	$18,851.0	$0.0
70 Vehicles *	$46,553.3	$0.0	$0.0	$0.0	$0.0	$0.0
80 Professional Services *	$220,347.0	$3,520.0	$4,520.0	$21,759.7	$26,841.1	$24,271.9
90 Unallocated Contingency *	527,561.1	$0.0	$0.0	$0.0	$3,475.2	$3,561.7
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Project Capital Cost	**$1,088,830.5**	**$3,520.0**	**$4,520.0**	**$37,155.7**	**$120,681.5**	**$112,148.8**
Interest Cost						
Total Interest Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*	*$96,020.0*	*$96,020.0*				
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*	*$731,000.0*	*$731,000.0*				
Total Prior Local/State Expenditure	***$827,020.0***	***$827,020.0***	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	**$1,915,850.5**	**$830,540.0**	**$4,520.0**	**$37,155.7**	**$120,681.5**	**$112,148.8**
Capital Revenues						
Federal						
5309 New Starts (Los Angeles)	$548,425.5	$0.0	$660.0	$16,290.8	$108,261.9	$102,888.4
5309 Bus and Bus Related Intermodal	$12,540.0	$0.0	$760.0	$3,111.8	$3,609.6	$3,260.4
FHWA TCSP	$2,900.0	$800.0	$2,100.0			
State						
State Funds (Proposition 192 Seismic Bond)	$13,912.0	$520.0	$420.0	$11,393.1	$1,618.9	
Other State Funds						
Regional/Local						
Carryover from Phase I	$4,000.0	$800.0		$3,200.0		
Southern California Association of Governments	$1,000.0	$1,000.0				
Interest	$2,000.0	$400.0	$400.0	$1,200.0		
Corridor Cities Contribution	$11,000.0				$2,500.0	$2,500.0
State/Regional/Local Sources	$74,055.3		$0.0	$0.0	$5,293.1	$3,500.0
Total Capital Revenues	**$1,089,838.5**	**$3,520.0**	**$4,520.0**	**$37,155.7**	**$120,681.5**	**$112,148.8**
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*	*$96,020.0*	*$96,020.0*				
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*	*$731,000.0*	*$731,000.0*				
Total Prior Local/State Expenditure	**$827,020.0**	**$827,020.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	**$1,915,850.5**	**$830,540.0**	**$4,520.0**	**$37,155.7**	**$120,681.5**	**$112,148.8**
	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
O&M COSTS AND REVENUES						
O&M Costs						
LRT	$302,597.6					
MTA Bus	$10,425.7					
Foothill Transit Bus	$110,589.8					
Total O&M Costs	**$424,413.1**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
O&M Revenues						
LRT Farebox Revenues	$63,072.3					
Bus Farebox Revenues	$32,403.7					
MTA Local Funds	$328,937.1					
TOTAL O&M REVENUES	**$424,413.1**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**

SAN BERNARDINO COUNTY USES AND SOURCES	TOTAL	FY 2004 and before	FY 2005	FY 2006	FY 2007	FY 2008
CAPITAL COSTS & REVENUES						
Capital Costs						
10 Guideway and Track Elements	$7,938.6	$0.0	$0.0	$0.0	$0.0	$0.0
20 Stations	$2,619.1	$0.0	$0.0	$0.0	$0.0	$0.0
30 Support Facilities	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
40 Sitework & Special Conditions	$16,903.0	$0.0	$0.0	$0.0	$0.0	$0.0
50 Systems	$8,505.5	$0.0	$0.0	$0.0	$0.0	$0.0
60 ROW, Land, Existing Improvements	$297.5	$0.0	$0.0	$0.0	$0.0	$0.0
70 Vehicles	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
80 Professional Services	$12,568.2	$480.0	$480.0	$656.9	$0.0	$0.0
90 Unallocated Contingency	$1,329.1	$0.0	$0.0	$0.0	$0.0	$0.0
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Project Capital Cost	**$50,220.9**	**$480.0**	**$480.0**	**$656.9**	**$0.0**	**$0.0**
Interest Cost	$0.0					
** *Prior State/Local Expenditure for Right of Way (SB Co)*	$1,030.0	$1,030.0				
TOTAL CAPITAL COST	**$51,250.9**	**$1,510.0**	**$480.0**	**$656.9**	**$0.0**	**$0.0**
Capital Revenues						
5309 New Starts (SANBAG)	$25,625.5			$328.4	$0.0	$0.0
SANBAG Local	$24,595.5	$480.0	$480.0	$328.4	$0.0	$0.0
** *Prior State/Local Expenditure for Right of Way (SB Co)*	$1,030.0	$1,030.0				
TOTAL CAPITAL REVENUES	**$51,250.9**	**$1,510.0**	**$480.0**	**$656.9**	**$0.0**	**$0.0**
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

Notes:

* Include costs associated with 10 LRT cars and additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

*** Reflects total uninflated cost of Phase I.

TABLE 5-9

FULL BUILD LRT ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA; APRIL 2014 TO MONTCLAIR (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CAPITAL COSTS & REVENUES							
Capital Costs							
10 Guideway and Track Elements	$21,108.5	$7,236.5	$21,719.2	$22,294.7	$22,912.3	$7,848.2	$0.0
20 Stations	$11,277.4	$2,566.5	$0.0	$16,632.9	$17,093.6	$3,903.4	$0.0
30 Support Facilities *	$0.0	$0.0	$1,531.5	$26,861.6	$28,045.4	$14,409.7	$0.0
40 Sitework & Special Conditions	$29,877.3	$10,199.1	$38,696.1	$39,926.9	$41,032.8	$14,055.1	$0.0
50 Systems	$23,927.0	$8,167.9	$26,312.5	$27,009.7	$27,757.9	$9,508.0	$0.0
60 ROW, Land, Existing Improvements	$0.0	$15,079.5	$46,190.9	$0.0	$0.0	$0.0	$0.0
70 Vehicles *	$0.0	$0.0	$1,982.9	$22,045.3	$22,525.1	$0.0	$0.0
80 Professional Services *	$13,281.1	$23,728.8	$34,423.5	$35,337.0	$18,910.7	$13,753.8	$0.0
90 Unallocated Contingency *	$3,644.7	$1,244.2	$3,776.1	$3,876.1	$3,957.0	$3,835.2	$0.0
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Project Capital Cost	**$103,206.0**	**$68,222.4**	**$174,832.6**	**$195,984.2**	**$182,244.9**	**$67,314.5**	**$0.0**
Interest Cost							
Total Interest Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*							
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*							
Total Prior Local/State Expenditure	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	**$103,206.0**	**$68,222.4**	**$174,832.6**	**$195,984.2**	**$182,244.9**	**$67,314.5**	**$0.0**
Capital Revenues							
Federal							
5309 New Starts (Los Angeles)	$99,820.2	$61,259.0	$156,987.6	$175,980.3	$163,643.3	$60,443.8	
5309 Bus and Bus Related Intermodal	$2,408.2						
FHWA TCSP							
State							
State Funds (Proposition 192 Seismic Bond)							
Other State Funds							
Regional/Local							
Carryover from Phase I							
Southern California Association of Governments							
Interest							
Corridor Cities Contribution				$3,000.0	$3,000.0		
State/Regional/Local Sources	$977.6	$6,963.4	$17,845.0	$17,003.9	$16,601.6	$6,870.7	
Total Capital Revenues	**$103,206.0**	**$68,222.4**	**$174,832.6**	**$195,984.2**	**$182,244.9**	**$67,314.5**	**$0.0**
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*							
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*							
Total Prior Local/State Expenditure	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	**$103,206.0**	**$68,222.4**	**$174,832.6**	**$195,984.2**	**$182,244.9**	**$67,314.5**	**$0.0**
	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
O&M COSTS AND REVENUES							
O&M Costs							
LRT		$4,162.5	$8,539.9	$8,766.1	$9,009.2	$9,258.0	$20,688.2
MTA Bus		$271.5	$556.9	$571.7	$587.6	$603.8	$621.8
Foothill Transit Bus		$2,890.0	$5,929.2	$6,086.3	$6,255.0	$6,427.7	$6,617.4
Total O&M Costs	**$0.0**	**$7,323.9**	**$15,026.0**	**$15,424.1**	**$15,851.8**	**$16,289.5**	**$28,127.1**
O&M Revenues							
LRT Farebox Revenues		$802.3	$1,646.1	$1,689.7	$1,736.6	$1,784.5	$4,283.2
Bus Farebox Revenues		$839.9	$1,723.3	$1,768.9	$1,818.0	$1,868.2	$1,930.7
MTA Local Funds		$5,681.5	$11,656.7	$11,965.4	$12,297.3	$12,636.8	$21,913.2
TOTAL O&M REVENUES	**$0.0**	**$7,323.9**	**$15,026.0**	**$15,424.1**	**$15,851.8**	**$16,289.5**	**$28,127.1**

SAN BERNARDINO COUNTY USES AND SOURCES

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CAPITAL COSTS & REVENUES							
Capital Costs							
10 Guideway and Track Elements	$0.0	$0.0	$2,305.9	$2,367.0	$2,432.5	$893.2	
20 Stations	$0.0	$0.0	$0.0	$1,157.7	$1,189.7	$271.7	
30 Support Facilities	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
40 Sitework & Special Conditions	$0.0	$0.0	$4,909.7	$5,039.8	$5,179.4	$1,774.1	
50 Systems	$0.0	$0.0	$2,488.0	$2,553.9	$2,624.6	$899.0	
60 ROW, Land, Existing Improvements	$0.0	$247.5	$0.0	$0.0	$0.0	$0.0	
70 Vehicles	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
80 Professional Services	$0.0	$1,341.5	$3,172.1	$3,255.0	$1,604.2	$1,378.5	
90 Unallocated Contingency	$0.0	$0.0	$319.1	$327.5	$336.6	$345.9	
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
Total Project Capital Cost	**$0.0**	**$1,838.9**	**$13,194.7**	**$14,700.8**	**$13,567.1**	**$5,562.5**	**$0.0**
Interest Cost							
** *Prior State/Local Expenditure for Right of Way (SB Co)*							
TOTAL CAPITAL COST	**$0.0**	**$1,838.9**	**$13,194.7**	**$14,700.8**	**$13,567.1**	**$5,562.5**	**$0.0**
Capital Revenues							
5309 New Starts (SANBAG)	$0.0	$1,299.5	$7,112.4	$7,350.4	$6,783.5	$2,751.2	
SANBAG Local	$0.0	$339.5	$6,082.4	$7,350.4	$6,783.5	$2,751.2	
** *Prior State/Local Expenditure for Right of Way (SB Co)*							
TOTAL CAPITAL REVENUES	**$0.0**	**$1,838.9**	**$13,194.7**	**$14,700.8**	**$13,567.1**	**$5,562.5**	**$0.0**
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

Notes:

* Include costs associated with 10 LRT cars and additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

*** Reflects total uninflated cost of Phase I.

TABLE 5-9

FULL BUILD LRT ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA; APRIL 2014 TO MONTCLAIR (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL COSTS & REVENUES									
Capital Costs									
10 Guideway And Track Elements									
20 Stations									
30 Support Facilities *									
40 Sitework & Special Conditions									
50 Systems									
60 ROW, Land, Existing Improvements									
70 Vehicles *									
80 Professional Services *									
90 Unallocated Contingency *									
100 Special Conditions									
Total Project Capital Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest Cost									
Total Interest Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*									
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*									
Total Prior Local/State Expenditure	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital Revenues									
Federal									
5309 New Starts (Los Angeles)									
5309 Bus and Bus Related Intermodal									
FHWA TCSP									
State									
State Funds (Proposition 192 Seismic Bond)									
Other State Funds									
Regional/Local									
Carryover from Phase I									
Southern California Association of Governments									
Interest									
Corridor Cities Contribution									
State/Regional/Local Sources									
Total Capital Revenues	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*									
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*									
Total Prior Local/State Expenditure	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
O&M COSTS AND REVENUES									
O&M Costs									
LRT	$21,519.7	$22,077.2	$22,677.9	$23,286.8	$23,910.1	$24,516.9	$25,127.9	$25,794.4	$26,413.6
MTA Bus	$640.4	$657.0	$674.9	$693.0	$711.5	$729.6	$747.8	$767.8	$786.0
Foothill Transit Bus	$6,817.5	$6,994.1	$7,184.4	$7,377.3	$7,574.7	$7,767.0	$7,960.9	$8,171.7	$8,367.9
Total O&M Costs	$28,977.5	$29,728.2	$30,537.1	$31,357.0	$32,196.3	$33,013.5	$33,836.2	$34,733.7	$35,567.5
O&M Revenues									
LRT Farebox Revenues	$4,412.7	$4,527.0	$4,650.2	$4,776.1	$5,126.6	$5,256.7	$5,387.7	$5,530.6	$5,663.4
Bus Farebox Revenues	$1,989.1	$2,040.6	$2,096.1	$2,152.4	$2,218.1	$2,274.4	$2,331.1	$2,393.0	$2,450.4
MTA Local Funds	$22,575.7	$23,160.6	$23,790.7	$24,429.5	$24,851.6	$25,482.3	$26,117.4	$26,810.1	$27,453.7
TOTAL O&M REVENUES	$28,977.5	$29,728.2	$30,537.1	$31,357.0	$32,196.3	$33,013.5	$33,836.2	$34,733.7	$35,567.5

SAN BERNARDINO COUNTY USES AND SOURCES

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL COSTS & REVENUES									
Capital Costs									
10 Guideway and Track Elements									
20 Stations									
30 Support Facilities									
40 Sitework & Special Conditions									
50 Systems									
60 ROW, Land, Existing Improvements									
70 Vehicles									
80 Professional Services									
90 Unallocated Contingency									
100 Special Conditions									
Total Project Capital Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest Cost									
** *Prior State/Local Expenditure for Right of Way (SB Co)*									
TOTAL CAPITAL COST	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital Revenues									
5309 New Starts (SANBAG)									
SANBAG Local									
** *Prior State/Local Expenditure for Right of Way (SB Co)*									
TOTAL CAPITAL REVENUES	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

NOTE:
* Include costs associated with 10 LRT cars and additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

*** Reflects total uninflated cost of Phase I.

TABLE 5-9

FULL BUILD LRT ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA; APRIL 2014 TO MONTCLAIR (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES		
	FY 2025	Total
CAPITAL COSTS & REVENUES		
Capital Costs		
10 Guideway and Track Elements		$144,157.7
20 Stations		$62,494.6
30 Support Facilities *		$72,848.2
40 Sitework & Special Conditions		$231,871.8
50 Systems		$168,879.3
60 ROW, Land, Existing Improvements		$95,517.4
70 Vehicles *		$46,553.3
80 Professional Services *		$220,347.0
90 Unallocated Contingency *		$27,381.1
100 Special Conditions		$0.0
Total Project Capital Cost	$0.0	$1,068,800.5
Interest Cost		$0.0
Total Interest Cost	$0.0	$0.0
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*		$96,020.0
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*		$731,000.0
Total Prior Local/State Expenditure	$0.0	$827,020.0
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	$0.0	$1,895,850.5
Capital Revenues		
Federal		
5309 New Starts (Los Angeles)		$948,425.3
5309 Bus and Bus Related Intermodal		$12,540.0
FHWA TCSP		$2,900.0
State		
State Funds (Proposition 192 Seismic Bond)		$15,910.0
Other State Funds		$0.0
Regional/Local		
Carryover from Phase I		$4,000.0
Southern California Association of Governments		$1,000.0
Interest		$2,000.0
Corridor Cities Contribution		$11,000.0
State/Regional/Local Sources		$74,055.3
Total Capital Revenues	$0.0	$1,069,830.5
** *Prior Local/State Expenditure for Ph I and II Right of Way (LA Co)*		$96,020.0
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre)*		$731,000.0
Total Prior Local/State Expenditure	$0.0	$827,020.0
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	$0.0	$1,895,850.5
	$0.0	$0.0
O&M COSTS AND REVENUES		
O&M Costs		
LRT	$27,049.3	$302,997.6
MTA Bus	$804.9	$10,425.7
Foothill Transit Bus	$8,569.2	$110,989.8
Total O&M Costs	$36,423.5	$424,413.1
O&M Revenues		
LRT Farebox Revenues	$5,799.7	$63,072.3
Bus Farebox Revenues	$2,509.4	$32,403.7
MTA Local Funds	$28,114.4	$328,937.1
TOTAL O&M REVENUES	$36,423.5	$424,413.1

SAN BERNARDINO COUNTY USES AND SOURCES		
	FY 2025	Total
CAPITAL COSTS & REVENUES		
Capital Costs		
10 Guideway and Track Elements		$7,938.8
20 Stations		$2,619.1
30 Support Facilities		$0.0
40 Sitework & Special Conditions		$16,903.0
50 Systems		$8,565.5
60 ROW, Land, Existing Improvements		$297.5
70 Vehicles		$0.0
80 Professional Services		$12,568.2
90 Unallocated Contingency		$1,329.1
100 Special Conditions		$0.0
Total Project Capital Cost	$0.0	$50,220.9
Interest Cost		$0.0
** *Prior State/Local Expenditure for Right of Way (SB Co)*		$1,030.0
TOTAL CAPITAL COST	$0.0	$51,250.9
Capital Revenues		
5309 New Starts (SANBAG)		$25,625.5
SANBAG Local		$24,595.5
** *Prior State/Local Expenditure for Right of Way (SB Co)*		$1,030.0
TOTAL CAPITAL REVENUES	$0.0	$51,250.9
Net Surplus/(Deficit)	$0.0	$0.0

Notes:
* Include costs associated with 10 LRT cars and additional buses.
** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.
*** Reflects total unmitigated cost of Phase I

Note: Includes capital costs of maintenance facility and 11 buses.

TABLE 5-10

BUILD LRT TO AZUSA ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES	TOTAL	FY 2004 and before	FY 2005	FY 2006	FY 2007	FY 2008
CAPITAL COSTS & REVENUES						
Capital Costs						
10 Guideway and Track Elements	$69,383.3	$0.0	$0.0	$0.0	$20,212.5	$20,715.8
20 Stations	$24,864.6	$0.0	$0.0	$0.0	$0.0	$11,020.7
30 Support Facilities *	$7,500.2	$0.0	$0.0	$0.0	$0.0	$0.0
40 Sitework & Special Conditions	$97,760.9	$0.0	$0.0	$0.0	$28,467.6	$29,196.9
50 Systems	$78,291.2	$0.0	$0.0	$0.0	$22,814.1	$23,382.2
60 ROW, Land, Existing Improvements	$34,247.0	$0.0	$0.0	$15,396.0	$18,851.0	$0.0
70 Vehicles *	$15,224.7	$0.0	$0.0	$0.0	$0.0	$0.0
80 Professional Services *	$94,625.6	$2,000.0	$2,500.0	$13,179.0	$26,841.1	$24,271.5
90 Unallocated Contingency *	$53,712.4	$0.0	$0.0	$0.0	$3,475.2	$3,591.7
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Project Capital Cost	**$428,980.4**	**$2,000.0**	**$2,500.0**	**$28,575.0**	**$120,681.5**	**$112,148.8**
Interest Cost						
Total Interest Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*	*$73,040.0*	*$73,040.0*				
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*	*$284,949.4*	*$284,949.4*				
Total Prior Local/State Expenditure	**$357,989.4**	**$357,989.4**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	**$793,978.7**	**$359,989.4**	**$2,500.0**	**$28,575.0**	**$120,681.5**	**$112,148.8**
Capital Revenues						
Federal						
5309 New Starts (Los Angeles)	$366,989.4	$0.0	$850.0	$18,200.8	$108,281.9	$102,888.4
5309 Bus and Bus Related Intermodal	$12,540.0			$2,884.2	$3,009.6	$3,260.4
FHWA TCSP	$1,450.0		$1,450.0			
State						
State Funds (Proposition 192 Seismic Bond)	$13,910.0	$500.0		$3,000.0	$6,910.0	$3,500.0
Other State Funds						
Regional/Local						
Carryover from Phase I	$4,000.0	$800.0		$3,200.0		
Southern California Association of Governments	$500.0	$500.0				
Interest	$1,600.0	$200.0	$200.0	$1,200.0		
Corridor Cities Contribution	$5,000.0				$2,500.0	$2,500.0
State/Regional/Local Sources	$0.0					
Total Capital Revenues	**$435,989.4**	**$2,000.0**	**$2,500.0**	**$28,575.0**	**$120,681.5**	**$112,148.8**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*	*$73,040.0*	*$73,040.0*				
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*	*$284,949.4*	*$284,949.4*				
Total Prior Local/State Expenditure	**$357,989.4**	**$357,989.4**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	**$793,978.7**	**$359,989.4**	**$2,500.0**	**$28,575.0**	**$120,681.5**	**$112,148.8**
O&M COSTS AND REVENUES						
O&M Costs						
LRT	$169,696.9					
MTA Bus	$9,339.7					
Foothill Transit Bus	$174,847.0					
Total O&M Costs	**$343,883.6**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
O&M Revenues						
LRT Farebox Revenues	$32,909.4					
Bus Farebox Revenues	$49,156.2					
MTA Local Funds	$261,817.9					
TOTAL O&M REVENUES	**$343,883.6**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**

SAN BERNARDINO COUNTY USES AND SOURCES	TOTAL	FY 2005 and before	FY 2005	FY 2006	FY 2007	FY 2008
CAPITAL COSTS & REVENUES						
Capital Costs						
10 Guideway and Track Elements	$0.0					
20 Stations	$0.0					
30 Support Facilities	$0.0					
40 Sitework & Special Conditions	$0.0					
50 Systems	$0.0					
60 ROW, Land, Existing Improvements	$0.0					
70 Vehicles	$0.0					
80 Professional Services	$0.0					
90 Unallocated Contingency	$0.0					
100 Special Conditions	$0.0					
Total Project Capital Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Interest Cost	$0.0					
** *Prior State/Local Expenditure on Right of Way(SB Co)*	$0.0					
TOTAL CAPITAL COST	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Capital Revenues						
5309 New Starts (SANBAG)	$0.0					
SANBAG Local	$0.0					
** *Prior State/Local Expenditure on Right of Way (SB Co)*	$0.0					
TOTAL CAPITAL REVENUES	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

Notes:

* Include costs associated with additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

*** Of the $731.0 million total actual cost of Phase I, $278.6 million has been used as match.

TABLE 5-10

BUILD LRT TO AZUSA ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CAPITAL COSTS & REVENUES							
Capital Costs							
10 Guideway and Track Elements	$21,108.5	$7,236.5	$0.0	$0.0	$0.0		
20 Stations	$11,277.4	$2,599.5	$0.0	$0.0	$0.0		
30 Support Facilities *	$0.0	$0.0	$3,808.5	$4,001.8	$0.0		
40 Sitework & Special Conditions	$29,877.2	$10,199.1	$0.0	$0.0	$0.0		
50 Systems	$23,927.0	$8,167.9	$0.0	$0.0	$0.0		
60 ROW, Land, Existing Improvements	$0.0	$0.0	$0.0	$0.0	$0.0		
70 Vehicles *	$0.0	$0.0	$5,048.9	$5,182.6	$4,992.7		
80 Professional Services *	$13,281.1	$10,188.7	$783.8	$904.5	$776.0		
90 Unallocated Contingency *	$3,644.7	$1,244.2	$592.3	$608.0	$586.3		
100 Special Conditions	$0.0	$0.0	$0.0	$0.0	$0.0		
Total Project Capital Cost	**$103,206.0**	**$39,602.8**	**$10,323.4**	**$10,596.9**	**$6,355.0**	**$0.0**	**$0.0**
Interest Cost							
Total Interest Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*							
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*							
Total Prior Local/State Expenditure	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	**$103,206.0**	**$39,602.8**	**$10,323.4**	**$10,596.9**	**$6,355.0**	**$0.0**	**$0.0**
Capital Revenues							
Federal							
5309 New Starts (Los Angeles)	$99,820.2	$39,602.8	$10,323.4	$10,596.9	$6,355.0	$0.0	
5309 Bus and Bus Related Intermodal	$3,385.8						
FHWA TCSP							
State							
State Funds (Proposition 192 Seismic Bond)							
Other State Funds							
Regional/Local							
Carryover from Phase I							
Southern California Association of Governments							
Interest							
Corridor Cities Contribution							
State/Regional/Local Sources							
Total Capital Revenues	**$103,206.0**	**$39,602.8**	**$10,323.4**	**$10,596.9**	**$6,355.0**	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*							
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*							
Total Prior Local/State Expenditure	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	**$103,206.0**	**$39,602.8**	**$10,323.4**	**$10,596.9**	**$6,355.0**	**$0.0**	**$0.0**
O&M COSTS AND REVENUES							
O&M Costs							
LRT		$4,162.5	$8,530.9	$8,766.1	$9,009.2	$9,258.0	$9,518.2
MTA Bus		$243.2	$498.9	$512.2	$526.4	$540.9	$556.8
Foothill Transit Bus		$4,552.7	$9,340.5	$9,587.9	$9,853.8	$10,125.9	$10,424.7
Total O&M Costs	**$0.0**	**$8,958.4**	**$18,370.3**	**$18,866.2**	**$19,389.4**	**$19,924.7**	**$20,499.7**
O&M Revenues							
LRT Farebox Revenues		$802.3	$1,646.1	$1,689.7	$1,736.6	$1,784.5	$1,951.7
Bus Farebox Revenues		$1,274.2	$2,614.2	$2,683.4	$2,757.9	$2,834.0	$2,928.9
MTA Local Funds		$6,881.8	$14,110.0	$14,493.0	$14,895.0	$15,306.2	$15,619.0
TOTAL O&M REVENUES	**$0.0**	**$8,958.4**	**$18,370.3**	**$18,866.2**	**$19,389.4**	**$19,924.7**	**$20,499.7**

SAN BERNARDINO COUNTY USES AND SOURCES

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CAPITAL COSTS & REVENUES							
Capital Costs							
10 Guideway and Track Elements							
20 Stations							
30 Support Facilities							
40 Sitework & Special Conditions							
50 Systems							
60 ROW, Land, Existing Improvements							
70 Vehicles							
80 Professional Services							
90 Unallocated Contingency							
100 Special Conditions							
Total Project Capital Cost	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Interest Cost							
** *Prior State/Local Expenditure on Right of Way(SB Co)*							
TOTAL CAPITAL COST	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Capital Revenues							
5309 New Starts (SANBAG)							
SANBAG Local							
** *Prior State/Local Expenditure on Right of Way (SB Co)*							
TOTAL CAPITAL REVENUES	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

Notes:

* Include costs associated with additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

*** Of the $731.0 million total actual cost of Phase I, $270.6 million has been used as match.

TABLE 5-10

BUILD LRT TO AZUSA ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL COSTS & REVENUES									
Capital Costs									
10 Guideway and Track Elements									
20 Stations									
30 Support Facilities *									
40 Sitework & Special Conditions									
50 Systems									
60 ROW, Land, Existing Improvements									
70 Vehicles *									
80 Professional Services *									
90 Unallocated Contingency *									
100 Special Conditions									
Total Project Capital Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest Cost									
Total Interest Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*									
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*									
Total Prior Local/State Expenditure	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital Revenues									
Federal									
5309 New Starts (Los Angeles)									
5309 Bus and Bus Related Intermodal									
FHWA TCSP									
State									
State Funds (Proposition 192 Seismic Bond)									
Other State Funds									
Regional/Local									
Carryover from Phase I									
Southern California Association of Governments									
Interest									
Corridor Cities Contribution									
State/Regional/Local Sources									
Total Capital Revenues	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*									
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*									
Total Prior Local/State Expenditure	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
O&M COSTS AND REVENUES									
O&M Costs									
LRT	$9,805.9	$10,000.0	$10,333.7	$10,611.1	$10,895.2	$11,171.7	$11,450.1	$11,733.8	$12,038.0
MTA Bus	$573.7	$588.5	$604.6	$620.8	$637.4	$653.6	$669.9	$687.6	$704.1
Foothill Transit Bus	$10,739.8	$11,018.1	$11,317.8	$11,621.7	$11,932.9	$12,235.7	$12,540.6	$12,873.2	$13,182.2
Total O&M Costs	$21,119.5	$21,606.6	$22,256.1	$22,853.7	$23,465.4	$24,061.0	$24,660.6	$25,314.7	$25,922.4
O&M Revenues									
LRT Farebox Revenues	$2,092.8	$2,062.9	$2,119.0	$2,175.9	$2,336.1	$2,395.3	$2,455.0	$2,520.3	$2,580.7
Bus Farebox Revenues	$3,017.4	$3,095.9	$3,179.8	$3,265.2	$3,364.9	$3,450.3	$3,536.3	$3,630.1	$3,717.2
MTA Local Funds	$16,681.5	$16,508.1	$16,957.3	$17,412.6	$17,764.4	$18,215.3	$18,669.2	$19,164.4	$19,624.5
TOTAL O&M REVENUES	$21,119.5	$21,666.6	$22,256.1	$22,853.7	$23,465.4	$24,061.0	$24,660.6	$25,314.7	$25,922.4

SAN BERNARDINO COUNTY USES AND SOURCES

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL COSTS & REVENUES									
Capital Costs									
10 Guideway and Track Elements									
20 Stations									
30 Support Facilities									
40 Sitework & Special Conditions									
50 Systems									
60 ROW, Land, Existing Improvements									
70 Vehicles									
80 Professional Services									
90 Unallocated Contingency									
100 Special Conditions									
Total Project Capital Cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Interest Cost									
** *Prior State/Local Expenditure on Right of Way(SB Co)*									
TOTAL CAPITAL COST	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital Revenues									
5309 New Starts (SANBAG)									
SANBAG Local									
** *Prior State/Local Expenditure on Right of Way (SB Co)*									
TOTAL CAPITAL REVENUES	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net Surplus/(Deficit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

notes:

* Include costs associated with additional buses

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA

*** Of the $731.0 million total actual cost of Phase I, $278.6 million has been used as match

TABLE 5-10

BUILD LRT TO AZUSA ALTERNATIVE: METRO GOLD LINE PHASE II EXTENSION – SEGMENTS 1 + 2 TO MONTCLAIR—ESCALATED CAPITAL COSTS CASHFLOW REVENUE OPERATION DATE: NOVEMBER 2009 TO AZUSA (IN YOE DOLLARS, THOUSANDS)

LOS ANGELES COUNTY USES AND SOURCES

	FY 2025	Total
CAPITAL COSTS & REVENUES		
Capital Costs		
10 Guideway and Track Elements		$69,363.3
20 Stations		$24,864.6
30 Support Facilities *		$7,900.2
40 Sitework & Special Conditions		$97,760.8
50 Systems		$79,291.2
60 ROW, Land, Existing Improvements		$34,347.0
70 Vehicles *		$15,224.2
80 Professional Services *		$94,625.6
90 Unallocated Contingency *		$13,712.4
100 Special Conditions		$0.0
Total Project Capital Cost	**$0.0**	**$435,989.4**
Interest Cost		$0.0
Total Interest Cost	**$0.0**	**$0.0**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*		$73,040.0
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*		$284,949.4
Total Prior Local/State Expenditure	**$0.0**	**$357,989.4**
TOTAL CAPITAL COST AND PRIOR EXPENDITURE	**$0.0**	**$793,978.7**
Capital Revenues		
Federal		
5309 New Starts (Los Angeles)		$306,089.4
5309 Bus and Bus Related Intermodal		$12,540.0
FHWA TCSP		$1,450.0
State		
State Funds (Proposition 192 Seismic Bond)		$13,010.0
Other State Funds		$0.0
Regional/Local		
Carryover from Phase I		$4,000.0
Southern California Association of Governments		$500.0
Interest		$1,000.0
Corridor Cities Contribution		$5,000.0
State/Regional/Local Sources		$0.0
Total Capital Revenues	**$0.0**	**$435,989.4**
** *Prior Local/State Expenditure for Right of Way (Ph I and Ph II to Azusa)*		$73,040.0
*** *Phase I - Metro Gold Line (Los Angeles to Sierra Madre - part of total)*		$284,949.4
Total Prior Local/State Expenditure	**$0.0**	**$357,989.4**
TOTAL CAPITAL REVENUES AND PRIOR EXPENDITURE	**$0.0**	**$793,978.7**
O&M COSTS AND REVENUES		
O&M Costs		
LRT	$12,325.5	$150,696.9
MTA Bus	$721.1	$9,339.7
Foothill Transit Bus	$13,499.5	$174,847.0
Total O&M Costs	**$26,546.2**	**$343,883.6**
O&M Revenues		
LRT Farebox Revenues	$2,642.8	$32,909.4
Bus Farebox Revenues	$3,806.7	$49,159.2
MTA Local Funds	$20,096.7	$261,817.9
TOTAL O&M REVENUES	**$26,546.2**	**$343,883.6**

SAN BERNARDINO COUNTY USES AND SOURCES

	FY 2025	Total
CAPITAL COSTS & REVENUES		
Capital Costs		
10 Guideway and Track Elements		$0.0
20 Stations		$0.0
30 Support Facilities		$0.0
40 Sitework & Special Conditions		$0.0
50 Systems		$0.0
60 ROW, Land, Existing Improvements		$0.0
70 Vehicles		$0.0
80 Professional Services		$0.0
90 Unallocated Contingency		$0.0
100 Special Conditions		$0.0
Total Project Capital Cost	**$0.0**	**$0.0**
Interest Cost		$0.0
** *Prior State/Local Expenditure on Right of Way(SB Co)*		$0.0
TOTAL CAPITAL COST	**$0.0**	**$0.0**
Capital Revenues		
5309 New Starts (SANBAG)		$0.0
SANBAG Local		$0.0
** *Prior State/Local Expenditure on Right of Way (SB Co)*		$0.0
TOTAL CAPITAL REVENUES	**$0.0**	**$0.0**
Net Surplus/(Deficit)	$0.0	$0.0

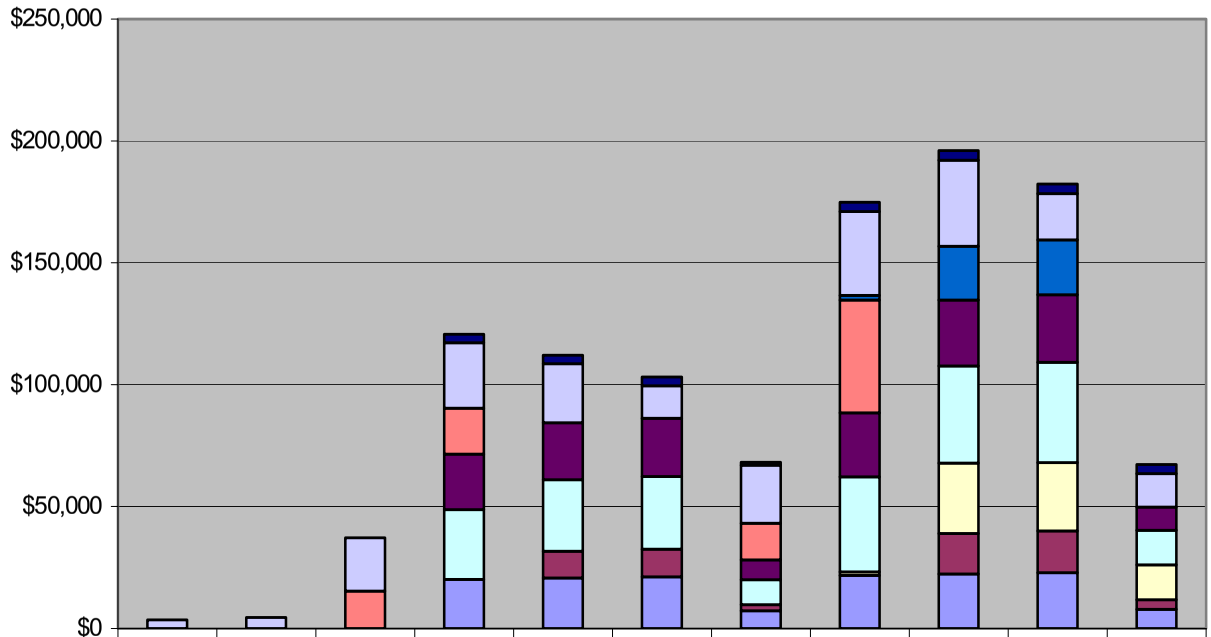
Notes:

* Include costs associated with additional buses.

** The Prior State/Local Expenditure on Right of Way reflects actual expenditure in 1992 and is in 1992 dollars. Per comments received from FTA, the Authority has not inflated this number to 2005 dollars, however the Authority reserves the right to escalate this figure to 2005 dollars if it is found later to be acceptable to FTA.

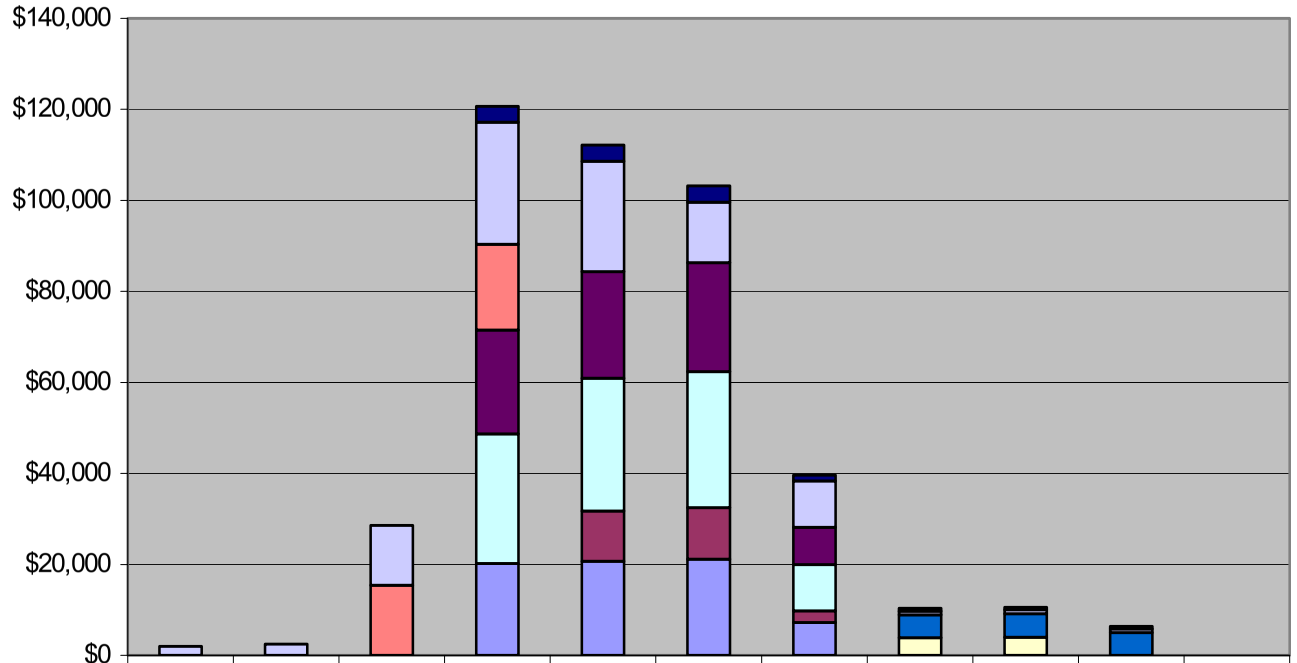
*** Of the $731.0 million total actual cost of Phase I, $276.0 million has been used as match

Note: Includes capital cost of 28 buses.



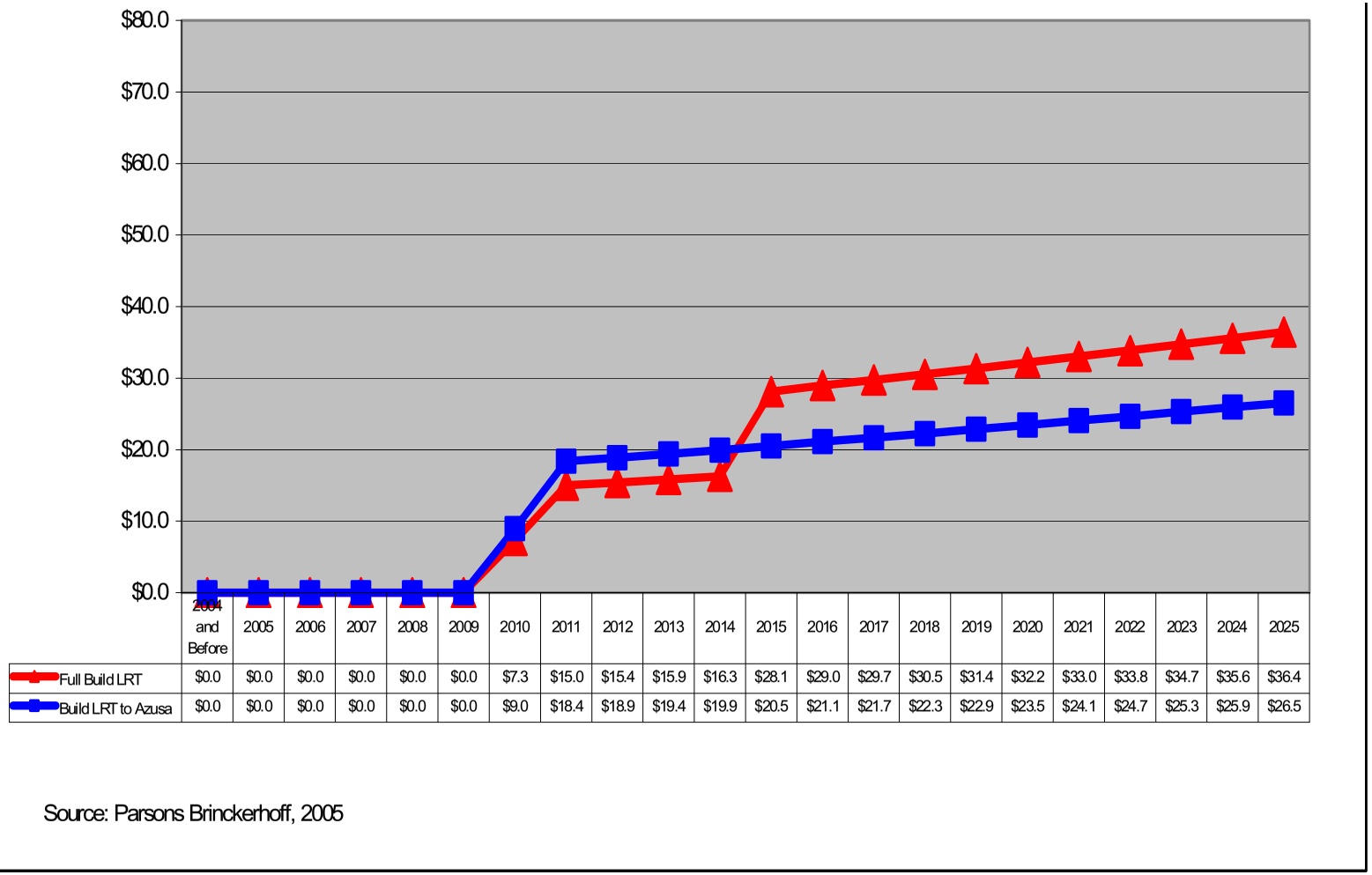
	2004 and Before	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Special Conditions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Unallocated Contingency *	$0	$0	$0	$3,475	$3,562	$3,645	$1,244	$3,776	$3,876	$3,967	$3,837
Professional Services *	$3,520	$4,520	$21,760	$26,841	$24,271	$13,281	$23,730	$34,427	$35,340	$18,912	$13,755
Vehicles *	$0	$0	$0	$0	$0	$0	$0	$1,983	$22,045	$22,525	$0
ROW, Land, Existing Improvements	$0	$0	$15,396	$18,851	$0	$0	$15,080	$46,191	$0	$0	$0
Systems	$0	$0	$0	$22,814	$23,382	$23,927	$8,168	$26,315	$27,012	$27,761	$9,509
Sitework & Special Conditions	$0	$0	$0	$28,488	$29,197	$29,877	$10,199	$38,901	$39,932	$41,038	$14,057
Support Facilties *	$0	$0	$0	$0	$0	$0	$0	$1,532	$28,862	$28,045	$14,410
Stations	$0	$0	$0	$0	$11,021	$11,277	$2,566	$0	$16,634	$17,095	$3,904
Guideway and Track Elements	$0	$0	$0	$20,213	$20,716	$21,198	$7,236	$21,721	$22,297	$22,915	$7,849

FIGURE 5-2: FULL BUILD LRT ALTERNATIVE CAPITAL COST, BY YEAR (PRE-2004 - 2014) (IN YEAR OF EXPENDITURE DOLLARS, THOUSANDS)



	2004 and Before	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Special Conditions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Unallocated Contingency *	$0	$0	$0	$3,475	$3,562	$3,645	$1,244	$592	$608	$586	
Professional Services *	$2,000	$2,500	$13,179	$26,841	$24,271	$13,281	$10,189	$784	$805	$776	
Vehicles *	$0	$0	$0	$0	$0	$0	$0	$5,049	$5,183	$4,993	
ROW, Land, Existing Improvements	$0	$0	$15,396	$18,851	$0	$0	$0	$0	$0	$0	
Systems	$0	$0	$0	$22,814	$23,382	$23,927	$8,168	$0	$0	$0	
Sitework & Special Conditions	$0	$0	$0	$28,488	$29,197	$29,877	$10,199	$0	$0	$0	
Support Facilties *	$0	$0	$0	$0	$0	$0	$0	$3,898	$4,002	$0	
Stations	$0	$0	$0	$0	$11,021	$11,277	$2,566	$0	$0	$0	
Guideway and Track Elements	$0	$0	$0	$20,213	$20,716	$21,198	$7,236	$0	$0	$0	

FIGURE 5-3: BUILD LRT TO AZUSA ALTERNATIVE CAPITAL COST, BY YEAR (PRE-2004 - 2014) (IN YEAR OF EXPENDITURE DOLLARS, THOUSANDS)



	2004 and Before	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Full Build LRT	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$7.3	$15.0	$15.4	$15.9	$16.3	$28.1	$29.0	$29.7	$30.5	$31.4	$32.2	$33.0	$33.8	$34.7	$35.6	$36.4
Build LRT to Azusa	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$9.0	$18.4	$18.9	$19.4	$19.9	$20.5	$21.1	$21.7	$22.3	$22.9	$23.5	$24.1	$24.7	$25.3	$25.9	$26.5

Source: Parsons Brinckerhoff, 2005

FIGURE 5-4: SUMMARY OF BUS AND LRT O&M COSTS , BY YEAR PRE-2004 – 2005 (IN YOE $, MILLIONS)

5-1.5 Financial Capability to Build and Operate

The 22-year cash flows indicate the timing and magnitude of the proposed funding resources required to implement and operate the build alternatives. As shown in the cash flows, federal and non-federal capital revenues are proposed to construct the build alternatives and initiate revenue service in the 2010 timeframe for service to Azusa and in the 2014 timeframe for full operation to Montclair.

5-2 COMPARATIVE ANALYSIS OF ALTERNATIVES

This section provides a variety of measures to evaluate and compare the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative to the No Build Alternative. In addition, the build alternatives will be compared to the TSM Alternative described in the Draft EIS/EIR as recommended by FTA. These measures are consistent with the FTA guidelines for assessing and evaluating major investments. **Table 5-11** summarizes the categories and measures included in this section.

TABLE 5-11
COMPARATIVE ANALYSIS OF ALTERNATIVES

Effectiveness in Improving Mobility	Corridor Goals and Objectives
	Ridership – New Transit Trips
	Travel Time Savings
Cost-Effectiveness	Incremental Cost per Incremental Hour of Transportation System User Benefit
Equity	Discussion of Demographic Factors

Other analyses and discussion for FTA measures related to air quality and land use can be found in Chapter 3. This chapter ends with a discussion of the trade-offs between the No Build and the build alternatives.

5-2.1 Effectiveness in Improving Mobility

Various elements serve as indicators of improved mobility including responsiveness to goals and objectives and transportation problems and deficiencies identified in Chapter 1. Ridership describes the amount of people using the proposed transit alternatives in 2025, as estimated through a transportation demand model. Travel time savings assess the annual value of time saved for transit users as a result of the proposed transit alternatives.

5-2.1.1 Corridor Goals and Objectives

In addition to the evaluation factors discussed below, the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative relate to the goals and objectives presented in Section 1-1.5.1 and Table 1-1.6. Throughout the planning development process these goals and objectives have been at the forefront of the alternatives development, analysis, and selection process. The nine goals are listed below:

- To locate stations that facilitate cities' visions for land use and development around transit stations and adjoining activity centers
- To create a system that creates/adds identity and attractiveness to San Gabriel Valley cities
- To complement other existing transit in the corridor and optimize previous investments
- To reduce auto dependency
- To improve mobility and provide connectivity to regional and local transit systems
- To implement a project within a reasonable period of time
- To develop a cost-effective transit system
- To improve air quality and preserve and protect the natural and man-made environment
- To work collaboratively with local cities throughout the project development process.

In addition to responding to the corridor's goals and objectives the alternatives directly related to assisting in solving the transportation problems that have been identified in the corridor. These problems and issues are presented in Section 1-2 of Chapter 1. The LRT Build alternatives respond most strongly to the goals, objectives, and problems within the corridor.

5-2.1.2 Ridership

For all proposed projects and alternatives, transit ridership is a function of travel time and cost. All else being equal, the faster technologies attract more riders. The speed is usually a function of both the technology and the physical conditions in which it has to operate. Longer segments have higher ridership because they service a larger area, incorporate more stations, and potentially reduce the number of transfers.

Transit ridership has been estimated for the Full Build (Pasadena to Montclair) Alternative, the Build LRT to Azusa Alternative, and the No Build Alternative using the latest MTA travel simulation model, based on the forecast year of 2025. The alternatives definitions are described in Chapter 2 and the model runs are discussed in Section 3-15, Traffic and Transportation.

The major measure of effectiveness of transit ridership for comparison between alternatives is the number of new "transit" trips compared to the No Build Alternative. Compared to the No Build Alternative, the Build LRT to Azusa Alternative attracted 10,100 new transit trips and the Full Build (Pasadena to Montclair) Alternative, 18,100 new transit trips. In addition, the usage of the expanded and extended Gold Line is increased by the build alternatives. The daily boardings in 2025 would increase from 59,000 in the No Build Alternative to approximately 79,000 for the Full Build (Pasadena to Montclair) Alternative and to approximately 69,300 for the Build LRT to Azusa Alternative.

5-2.1.3 Travel Time Savings

The travel time savings measure is defined as the total travel time savings for transit riders that would be expected to result from the build alternatives in the forecast year (2025), compared to the No Build Alternative. Compared to the No Build Alternative, the Build LRT to Azusa Alternative would save riders 2.4 million hours per year and the Full Build (Pasadena to Montclair) Alternative, 3.9 million hours per year.

5-2.2 Efficiency (Cost-Effectiveness)

Cost-effectiveness is a measure used to evaluate how the costs of a transit project alternative (for both construction and operation) compare to the expected benefits. Over the last few years FTA has revised the cost-effectiveness measure and changed the measure of benefits from "new transit trips" to "transportation system user benefits or travel time benefits in annual hours" for the proposed alternatives. FTA's change reflects their decision that the cost per hour of transportation system user benefits is a preferable measure for cost-effectiveness (as compared to the former measure of cost per new transit trip), as it (1) captures the benefits which accrue to all transit system users (including existing transit riders); (2) better reflects the underlying reason for ridership increases – improvements in travel time; (3) incorporates and considers the nature of the service being provided by the proposed project (for example, the measure distinguishes the benefits of long vs. short trips); and (4) does not penalize those agencies which are already providing a high level of transit service in a corridor for which a major capital investment is proposed.

FTA's cost-effectiveness criterion is measured by the incremental cost per hour of transportation system user benefit in the forecast year for the build alternatives compared to the No Build and TSM Alternatives. This measure is based on the annualized total capital investment and annual operating and maintenance (O&M) costs divided by the annual hours of transportation system user benefits.

To calculate the change in capital cost, project costs, discussed in Section 5-1.1.1, were aggregated according to their assumed useful life and annualized accordingly, using FTA annualization factors shown in **Table 5-12**.

TABLE 5-12
LIFE CYCLE ASSUMPTIONS

Project Element	Useful Life	Annualization Factor
Right-of-way	100 years	0.0701
Exclusive at-grade guideway	80 years	0.0703
At-grade stations	70 years	0.0706
Light rail vehicles	25 years	0.0858
Buses	12 years	0.1259

Source: Technical Guidance Major Capital Project Costs, FTA, June 24, 2005

Annual O&M costs were calculated using the approach described in Section 5-1.1.2. The change in the hours of transportation system user benefits for the forecast year 2025 was determined using the LACMTA travel forecasting model.

Table 5-13 presents the 2025 annualized cost and benefit values and the resulting cost-effectiveness for the build alternatives compared to the No Build and TSM Alternatives.

TABLE 5-13
COST-EFFECTIVENESS—INCREMENTAL COST PER HOUR OF TRANSPORTATION SYSTEM USER BENEFIT (YEAR 2025)

Factor	Alternatives			
	No Build	TSM Alternative	Full Build (Pasadena to Montclair) Alternative [1]	Build LRT to Azusa Alternative
Annualized capital cost (million 2005 $)	$0.0	$6.13	$67.96	$30.81
Total systemwide annual O&M cost (million 2005 $)	$1,172.97	$1,183.31	$1,194.68	$1,188.79
Total annualized cost in forecast year (2025) (million 2005 $)	$1,172.97	$1,189.44	$1,262.64	$1,219.60
Incremental annualized cost compared to No Build (million 2005 $)	N/A	$16.47	$89.67	$46.63
Incremental annualized cost compared to TSM (million 2005 $)	N/A	N/A.	$73.20	$30.16
Annual hours of user benefit compared to No Build (million)	N/A	0.98	3.93	2.35
Annual hours of user benefit compared to TSM (million)	N/A	N/A	3.09	1.43
Cost – effectiveness to No Build	N/A	**$16.81**	**$22.82**	**$19.84**
Cost – effectiveness to TSM	N/A	N/A	**$23.69**	**$21.09**

[1] Includes ¼ cost of M&O facility.
Source: Parsons Brinckerhoff, 2005.

5-2.3 Equity Considerations

Equity considerations generally fall into three interrelated classes: (1) the extent to which the transportation investments improve transportation service to various population segments (i.e., the extent to which transit improvements benefit the transit dependent); (2) the distribution of project costs across the population through the funding mechanisms used for the local construction and operation; and (3) the incidence of significant environmental impacts. In addition, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that

federal agencies consider and address disproportionately high adverse environmental effects of proposed federal projects on the health and environment of minority and low-income populations to the greatest extent practicable by law. Section 3-14.2.8 (Environmental Justice) of this document discusses the equity and environmental consideration for the study corridor and the alternatives under consideration. Section 8 (Public Outreach) of this document discusses the extensive outreach program to all groups that have been part of the planning process.

The No Build Alternative would not offer the study area residents and businesses the enhanced mobility, regional connectivity, and accessibility provided by the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative as stated in the goals and objectives and the statement of purpose and need.

The Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative provide many benefits related to equity, accessibility to opportunities, mobility improvements, economic revitalization, employment opportunities, federal, state, and local funds for construction, and additional funds for the operating and maintenance cost of the LRT and expanded bus services.

For instance, both build alternatives provide increased accessibility for corridor residents to the major regional employment center in Pasadena, and via Phase I of the Gold Line to employment in central Los Angeles. The build alternatives also provide connection among the activity centers in the corridor cities. These activity centers, described in Chapter 3, Section 3-14 (Socio-economics), also include such major employers and community assets as hospitals and universities.

Planning by corridor cities indicate their interest and commitment to economic development/ redevelopment in the vicinity of proposed LRT stations. The build alternatives provide an impetus to support planned growth in each of the cities on an equitable basis: the level of service for each city is the same.

Table 5-14 summarizes the significant transportation characteristics related to the alternatives.

TABLE 5-14
SUMMARY OF SIGNIFICANT TRANSPORTATION CHARACTERISTICS

Factor	Alternatives			
	No Build	**TSM Alternative**	**Full Build (Pasadena to Montclair) Alternative**	**Build LRT to Azusa Alternative**
Capital Cost (million 2005 $)	$0.0	$69.2	$976.3	$402.3
Annual O&M Cost compared to No Build (million 2005 $)	N/A.	$10.34	$21.71	$15.82
Annual Hours of Transit User Benefit compared to No Build (million)	NA	0.98	3.93	2.35

TABLE 5-14
SUMMARY OF SIGNIFICANT TRANSPORTATION CHARACTERISTICS

Factor	Alternatives			
	No Build	**TSM Alternative**	**Full Build (Pasadena to Montclair) Alternative**	**Build LRT to Azusa Alternative**
Daily New Transit Trips compared to No Build	N/A.	3,100	18,100	10,100
Annual New Transit Trips compared to No Build (millions)	N/A.	0.99	5.79	3.23

Source: Parsons Brinckerhoff, 2005.

5-2.4 Trade-Offs Between Alternatives

The trade-offs between the No Build Alternative and the Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternatives are that the No Build Alternative would involve fewer environmental impacts, but would not provide an enhanced level of mobility and accessibility to the ethnically diverse and minority communities along the corridor. The Full Build (Pasadena to Montclair) Alternative and the Build LRT to Azusa Alternative would, on the other hand, provide improved access to a broader range of employment, shopping, educational, and cultural opportunities, consistent with the goals and objectives discussed above and in Chapter 1. The longer Full Build (Pasadena to Montclair) Alternative would provide the most benefits as it provides LRT service to all the communities along the corridor.

The financial trade-offs between the Full Build LRT and the Build LRT to Azusa Alternatives and the No Build Alternative are directly related to the ability of the region and the local communities in concert with the federal and state governments to adequately fund the construction and operation of the build alternatives as discussed in Sections 5-1.3 and 5-1.4.

From a mobility standpoint the Full Build (Pasadena to Montclair) Alternative provides the greatest improvements to mobility for the residents and businesses along the corridor and is the most effective in satisfying the goals and objectives for the corridor.

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